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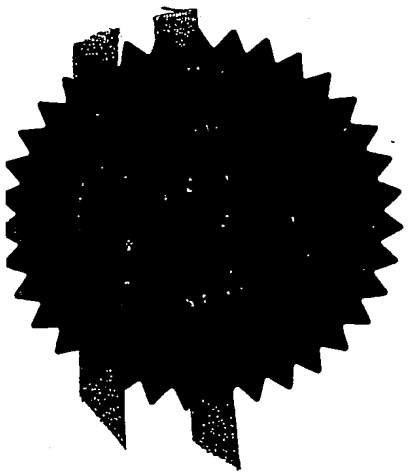

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2.	Patent application number *(The Patent Office will fill in this part)*	08 JUN 2002 **0213186.0**
3.	Full name, address and postcode of the or of each applicant *(underline all surnames)*	**University of Dundee** 11 Perth Road Dundee DD1 4HN United Kingdom
	07822760001 Patents ADP number *(if you know it)*	
	If the applicant is a corporate body, give the country/state of its incorporation	United Kingdom
4.	Title of the invention	METHODS
5.	Name of your agent *(if you have one)* "Address for service" in the United Kingdom to which all correspondence should be sent *(including the postcode)*	**ERIC POTTER CLARKSON** **PARK VIEW HOUSE** **58 THE ROPEWALK** **NOTTINGHAM** **NG1 5DD**
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P01/7700 0.00-0213186.0

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ERIC POTTER CLARKSON

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METHODS

The present invention relates to protein kinase catalytic domain structures and mutants and screening assays making use thereof.

The 3-Phosphoinositide Dependent Protein Kinase-1 (PDK1) is a key protein kinase, regulating activity of a group of related protein kinases through phosphorylation. These kinases include isoforms of Protein Kinase B (also known as Akt) [Brazil and Hemmings, 2001,Scheid and Woodgett, 2001], p70 ribosomal S6 kinase (S6K) [Alessi et al.,.1997,Volarevic and Thomas, 2001], p90 ribosomal S6 Kinase (RSK) [Frodin and Gammeltoft, 1999] and the serum and glucocorticoid induced-protein kinase (SGK) [Lang and Cohen, 2001]. These enzymes are stimulated by hormones and growth factors and phosphorylate regulatory proteins mediating the various physiological effects of these agonists.

PDK1 possesses an N-terminal kinase catalytic domain and a C-terminal pleckstrin homology (PH) domain [Alessi et al., 1997,Stephens et al., 1998]. PDK1 activates its substrates by phosphorylating these kinases at their activation loop (reviewed in [Alessi, 2001,Toker and Newton, 2000]). The phosphorylation of PKB by PDK1 is dependent upon prior activation of the phosphoinositide 3-kinase (PI-3-kinase) and the production of the second messenger, phosphatidylinositol 3,4,5-trisphosphate (PtdIns(3,4,5)P_3) which binds to the PH domains of PDK1 and PKB. This does not activate either PKB or PDK1 but instead recruits and co-localises these enzymes at the plasma membrane.

Unlike PKB, the other PDK1 substrates described thus far do not interact with PtdIns(3,4,5)P_3 nor is the rate at which they are phosphorylated by PDK1 further enhanced by the binding of PDK1 to PtdIns(3,4,5)P_3. Instead the ability of PDK1 to phosphorylate S6K, SGK and RSK is promoted by

phosphorylation of these enzymes at a residue located C-terminal to the kinase catalytic domain in a region known as the hydrophobic motif [Alessi et al., 1997,Kobayashi and Cohen, 1999, Pullen et al., 1998]. The kinases that phosphorylate the hydrophobic motif of S6K and SGK are unknown but as the phosphorylation of this residue *in vivo* is dependent on PI-3-kinase activation, the hydrophobic motif kinases and/or the hydrophobic motif phosphatases may be regulated by PtdIns(3,4,5)P_3. In the case of RSK isoforms, phosphorylation by the ERK1/ERK2 MAP kinases induce phosphorylation of the hydrophobic motif (reviewed in Frodin and Gammeltoft, 1999).

PDK1 belongs to the same subfamily of protein kinases as its substrates, termed the AGC protein kinases as they are related to the cAMP dependent protein kinase (PKA)/cGMP dependent protein kinase/Protein kinase C (PKC). PKA is the only AGC kinase whose crystal structure has been solved. Like all protein kinases, its catalytic core possesses an N-terminal lobe consisting mainly of β-sheet and a predominantly α-helical C-terminal lobe [Taylor et al., 1992, Husen and Kuriyan, 2002]. The ATP binding site is located in between the 2 lobes [Johnson et al., 2001,Knighton et al., 1991]. At the very C-terminus, PKA possesses an extended loop that terminates in the sequence FXXF which resembles the first part of the hydrophobic motif phosphorylation site of S6K and SGK (FXXFS/TY) in which the Ser/Thr is the phosphorylated residue [Biondi et al., 2000]. In the structure of PKA, the FXXF motif is buried in a hydrophobic pocket in the small lobe of the PKA catalytic domain [Knighton et al., 1991] and mutation of either of the Phe residues drastically reduces PKA activity towards a peptide substrate [Etchebehere et al., 1997]. Unlike other AGC kinases, PDK1 does not possess a hydrophobic motif C-terminal to its catalytic domain. However, there is evidence that PDK1 possesses a hydrophobic pocket in the small lobe of its catalytic domain similar to that

in PKA. We have biochemically demonstrated that the interaction of PDK1 with four of its substrates (S6K1, SGK1, PKζ and PKC related kinase-2 (PRK2)) is reduced or abolished by mutation of residues predicted to form part of this pocket [Balendran et al., 2000,Biondi et al., 2000]. Furthermore, mutation of a central residue in the predicted pocket, Leu 155, prevented PDK1 from phosphorylating and activating S6K1 and SGK1 without affecting its ability to phosphorylate either PKB or a short peptide substrate that encompasses the activation loop of PKB (T308tide) [Biondi et al., 2000]. The hydrophobic pocket on the kinase domain of PDK1 has been termed the "PIF-pocket" after the name of the first AGC-kinase hydrophobic motif-containing peptide (PDK1 Interacting Fragment) that was found to bind PDK1 [Balendran et al., 1999a]. It has been suggested that the PIF-pocket in PDK1 functions as a docking site, enabling PDK1 to interact with some of its.physiological substrates. Furthermore, there is evidence.that phosphorylation of the hydrophobic motif of S6K1, SGK and RSK2 [Balendran et al., 1999b,Biondi et al., 2001, Frodin et al., 2000] promotes the interaction of these enzymes with PDK1. These findings suggest that the PIF-pocket on PDK1 could contain a phosphate binding site promoting the binding of PDK1 to a subset of substrates (S6K, SGK and RSK) once these enzymes have been phosphorylated at their hydrophobic motif. This would result in a physiological phosphate dependent interaction. In addition there is evidence that occupancy of the PIF-pocket activates PDK1 as peptides that encompass the hydrophobic motif of PRK2 [Biondi et al., 2000] and RSK [Frodin et al., 2000] induce a 4-6-fold activation of PDK1.

Previous predicted structures PDK1 catalytic domain were obtained using homology modelling methods based upon structural information available from the catalytic domain of PKA (Biondi et al., 2000). These predictions of the PDK1 catalytic domain structure were thus biased towards the catalytic domain from which the structural information was obtained.

We have determined a crystal structure for the kinase domain of the AGC family protein kinase PDK. The structure defines the PIF-pocket and reveals an adjacent possible phosphate binding site. Furthermore, we have performed structure-based mutagenesis and biochemical analysis which support the existence of such a phosphate-binding site. This may mediate the phosphate dependent docking interaction with substrates such as (for PDK1) S6K and SGK. We have used a novel algorithm to define the conformational state of the crystallised PDK1 relative to all the reported structures of PKA, which shows that while PDK1 has all the signs of being in an active form in the crystal, its overall conformation is in-between and 'open' and 'closed' state. On the basis of this work we provide drug screening methods and mutated protein kinase molecules (which are useful in, for example, drug screening methods).

A first aspect of the invention provides a method for selecting or designing a compound for modulating the activity of phosphoinositide dependent protein kinase 1 (PDK1), the method comprising the step of using molecular modelling means to select or design a compound that is predicted to interact with the protein kinase catalytic domain of PDK1, wherein a three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 is compared with a three-dimensional structure of a compound, and a compound that is predicted to interact with the said protein kinase catalytic domain is selected, wherein the three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 is a three-dimensional structure (or part thereof) determined for a polypeptide consisting of residues equivalent to residues 51 to 359 of full length human PDK1, or a fragment or fusion thereof.

The term PDK1 as used herein includes a polypeptide (a PDK1 polypeptide) comprising the amino acid sequence identified as PDK1 in Alessi D.R *et al* (1997) *Curr. Biol.* 7: 261-269, Alessi D.R *et al* (1997) *Curr. Biol.* 7: 776-789, Stokoe D *et al* (1997) *Science* 277: 567-570 or Stephens L *et al* (1998) *Science* 279: 710-714, or a variant, fragment, fusion or derivative thereof, or a fusion of a said variant or fragment or derivative, for example as described in WO98/41638, incorporated herein by reference. It is preferred that the said PDK1 polypeptide is a protein kinase. It is preferred that the said PDK1 polypeptide is a protein kinase that is capable of phosphorylating a threonine residue that lies in a Thr-Phe-Cys-Gly-Thr-Xaa-Glu-Leu consensus motif (where the underlined Thr corresponds to the threonine that is phosphorylated by PDK1 and Xaa is a variable residue), and preferably that is capable of phosphorylating PKB, for example PKBα, at residue Thr308. The rate at which the said PDK1 polypeptide is capable of phosphorylating a threonine residue as described above may be increased in the presence of PtdIns(3,4,5)P_3 or PtdIns(3,4)P_2 but it will be appreciated that this is not essential. The said polypeptide may be capable of phosphorylating the equivalent residues to Thr308 of PKBα on PKC isoforms (LeGood *et al* (1998) *Science* 281: 2042-2045; *et al* (1998) *Curr. Biol.* 8: 1069-1077; Dutil *et al* (1998) *Curr. Biol.* 8:1366-1375), p70 S6 kinase (Alessi *et al* (1998) *Curr. Biol.* 8: 69-81; Pullen *et al* (1998) *Science* 279, 707-710), SGK (sequence given in Webster *et al* (1993) *Mol. Cell. Biol.* 13, 1031-2040; equivalent residues identified in US application no 112217 filed on 14 December 1998; GB 9919676.8, filed on 19 August 1999, and Kobayashi & Cohen (1999)) and PKA (Cheng *et al* (1998) *Proc. Natl. Acad. Sci. USA* 95: 9849-9854). It may further be preferred that the substrate specificity and/or other characteristics of the said PDK1 polypeptide *in vitro* may be substantially as reported in Alessi D.R *et al* (1997) *Curr. Biol.* 7: 261-269, Alessi D.R *et al* (1997) *Curr. Biol.* 7: 776-

789, Stokoe D *et al* (1997) *Science* **277**: 567-570 or Stephens L *et al* (1998) *Science* **279**: 710-714.

We have found that a fragment of PDK1 consisting essentially of residues equivalent to residues 51 to 359 of full length human PDK1 is particularly beneficial for determining a structure for the catalytic domain of PDK1. This fragment has, for example, protein kinase activity and surprisingly beneficial solubility and stability characteristics which make it particularly suitable for structural studies, for example formation of crystals which may be analysed by X-ray crystallography methods. Other fragments of PDK1 were surprisingly found to be unsuitable for crystallisation, as discussed in Example 5.

It is particularly preferred that the structure is one determined for the fragment consisting of residues 51 to 359 of full length human PDK1. The fragment may comprise an N-terminal or C-terminal fusion polypeptide (ie amino acid sequence not derived from PDK1), though this is preferably of less than or equal to about 10, 5, 4, 3, 2 or 1 amino acids. For example, it is particularly preferred that the structure is one determined for a polypeptide consisting residues 51 to 359 of full length human PDK1 and the amino acid sequence Gly-Pro (or less preferably other sequence forming part of a protease cleavage site) preceding the methionine corresponding to Met51 of human PDK1. A further preferred structure is one determined for the fragment consisting essentially of residues 71 to 359 of full length human PDK1 (or residues equivalent thereto), which also has protein kinase activity.

It is particularly preferred that the structure is one determinable by a method as described in Example 1, for example a structure obtainable by X-ray analysis from a crystal obtainable using a mother liquor solution comprising

ammonium sulphate, preferably between 1.8 and 2.2M. It is particularly preferred that the mother liquor solution is of pH 7 to 9, preferably 7 to 8.5, most preferably pH8.5, and comprises ammonium sulphate and preferably ATP. Crystals may form in the absence of ATP but better crystals may be obtained in the presence of ATP. Preferably the crystal is obtainable using a mother liquor solution containing 0.1M Tris/HCl pH 8.5, 2.0 M ammonium sulphate, 16.6 mM ATP. Further preferred details of the crystallisation and X-ray analysis are described in Example 1, for example as partially summarised in Table 1 (shown in Example 1).

It is particularly preferred that the structure is that represented by the structure co-ordinates shown in Examples 2, 3 or 4, or a structure based or modelled on such a structure or co-ordinates. The co-ordinates shown in Example 2 are for the PDK1fragment with all alternate side chains. The co-ordinates shown in Example 3 are for the PDK1 fragment without alternate side chains. The co-ordinates shown in Example 4 are for the dimer of the PDK1 fragment, without alternate side chains; chain A is the molecule for which co-ordinates are given in Examples 2 and 3, and chain B is the symmetry-related molecule.

It is preferred that the molecule is predicted to bind to a region of the structure termed the "PIF binding pocket", the "phosphate binding pocket" and/or the α C helix (residues equivalent to 123-136 of full length human PDK1), particularly the residue equivalent to Arg 131 of full length human PDK1, or interacting regions. As discussed in Example 1, the PIF binding pocket is considered to be formed by residues including Lys115, Ile118, Ile119 on the αB helix, Val124, Val127 on the αC helix and Leu 155 on β-sheet 5. The phosphate binding pocket is considered to be formed by residues including Lys76, Arg 131, Thr 148 and Gln150. Residues of the αC helix that are considered to interact either with phosphate bound in the

phosphate binding site or intermolecularly with phosphorylated Ser241 of PDK1 include Arg131 (phosphate binding site) and Arg 129 and His126 (phosphorylated Ser241). Glu 130 is involved in binding the α-phosphate of the bound ATP, and Val124 and Val127 form part of the PIF binding pocket, as discussed in Example 1.

It is preferred that the compound is for modulating the protein kinase activity of PDK1. The protein kinase activity of PDK1 that is modulated may be phosphorylation of the underlined residue in a polypeptide with the amino acid sequence Thr/Ser-Phe-Cys-Gly-Thr-Xaa-Glu-Leu ("PDK1" activity). Alternatively or in addition, the modulated activity may be phosphorylation of the underlined residue in a polypeptide with the amino acid sequence Phe-Xaa-Xaa-Phe-Ser/Thr-Phe/Tyr ("PDK2" activity). The substrate polypeptide may be, for example, a PKB, SGK, p70 S6 kinase, PKC or (in relation only to phosphorylation of the underlined residue in a polypeptide with the amino acid sequence Thr/Ser-Phe-Cys-Gly-Thr-Xaa-Glu-Leu) PKA polypeptide. The modulated protein kinase activity may be towards PKB or other PH-domain-comprising/phosphoinositide-binding substrate of PDK1; or SGK, S6K or other substrate of PDK1 whose phosphorylation by PDK1 is promoted by phosphorylation of the substrate on the Ser/Thr of the "hydrophobic motif" FXXFS/TY; or an artificial substrate such as T308tide (which comprises the sequence of PKB which is phosphorylated by PDK1) or PDKtide (which comprises the sequence of PKB which is phosphorylated by PDK1 (eg T308tide) fused to a sequence mimicking a phosphorylated hydrophobic motif ie FXXFZY, in which Z is a negatively charged (for example acidic) residue (eg PIFtide)). Such substrates for PDK1 are discussed, for example, in WO 01/44497. Other activities of PDK1 that may be modulated include interactions with other polypeptides or phosphoinositides and/or intramolecular interactions.

It is preferred that the three-dimensional structure of at least a part of the protein kinase catalytic domain of the PDK1 is a three-dimensional structure of at least a part of the PIF binding pocket, the phosphate binding pocket and/or the α C helix, or interacting regions of PDK1, and a compound that is predicted to interact with the said PIF binding pocket, the phosphate binding pocket and/or the α C helix, or interacting regions of PDK1 is selected. Alternatively, the compound may bind to a portion of said PDK1 polypeptide that is not the PIF binding pocket, the phosphate binding pocket and/or the α C helix, or interacting regions of PDK1, for example so as to interfere with the binding of the ATP or substrate polypeptide or their access to the catalytic site. In a still further example, the compound may bind to a portion of PDK1 so as to decrease said polypeptide's activity by an allosteric effect. This allosteric effect may be an allosteric effect that is involved in the natural regulation of PDK1's activity.

It is further preferred that the three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 is a three-dimensional structure of the part of the protein kinase catalytic domain of PDK1 that is defined by residues Lys115, Ile118, Ile119 (on the αB helix), Val124, Val127 (on the αC helix) and Leu 155 (on β-sheet 50 and/or residues Lys76, Arg 131, Thr 148 and Gln150 and/or residues Arg131, Arg 129, His126, Glu 130 of full-length human PDK1 and a compound that is predicted to interact with the said part of the protein kinase catalytic domain is selected.

For example, it is preferred if the portions of the structure of PDK1 shown in Figures 1 and 2 as forming the PIF binding pocket and/or phosphate binding pocket and/or αC helix interactions (for example with

phosphoserine241) are compared with the structure of the candidate compound.

A further aspect of the invention provides a method for selecting or designing a compound for modulating the activity of a hydrophobic pocket (PIF binding pocket)-containing protein kinase having a hydrophobic pocket in the position equivalent to the hydrophobic pocket of human PDK1 that is defined by residues including Lys115, Ile118, Ile119, Val124, Val127 and/or Leu155 of full-length human PDK1 and further having a phosphate binding pocket in the position equivalent to the phosphate binding pocket of human PDK1 that is defined by residues including Lys76, Arg131, Thr148 and/or Gln150, the method comprising the step of using molecular modelling means to select or design a compound that is predicted to interact with the said hydrophobic pocket-containing protein kinase, wherein a three-dimensional structure of a compound is compared with a three-dimensional structure of the said phosphate binding pocket and optionally also the hydrophobic pocket and/or αC helix or region interacting therewith, and a compound that is predicted to interact with the said phosphate binding pocket and optionally also the hydrophobic pocket and/or αC helix or region interacting therewith, is selected.

The three-dimensional structure of a compound may be compared with the three-dimensional structure of the hydrophobic and/or phosphate binding pocket and/or αC helix or region interacting therewith, as appropriate. A compound that can interact with the hydrophobic pocket and/or phosphate binding pocket, in particular residues noted above as defining such regions, in a similar manner (for example similar separation and/or type of interaction ie hydrophobic or ionic, and/or similar cumulative energy of interaction) to an interacting polypeptide such as S6K-pHM may be

selected. Methods of assessing the interaction are well known to those skilled in the art and are discussed further below.

The three-dimensional structures that are compared may be, as appropriate, predicted or modelled three-dimensional structures (for example on the basis of a PDK1 structure as referred to above, for example as represented by the co-ordinates given in Examples 2, 3 or 4) or may be three-dimensional structures that have been determined, for example by techniques such as X-ray crystallography, as well known to those skilled in the art. The three-dimensional structures may be displayed by a computer in a two-dimensional form, for example on a computer screen. The comparison may be performed using such two-dimensional displays.

The following relate to molecular modelling techniques: Blundell *et al* (1996) Stucture-based drug design *Nature* **384**, 23-26; Bohm (1996) Computational tools for structure-based ligand design *Prog Biophys Mol Biol* **66(3)**, 197-210; Cohen *et al* (1990) *J Med Chem* **33**, 883-894; Navia *et al* (1992) *Curr Opin Struct Biol* **2**, 202-210 .

The following computer programs, for example, may be useful in carrying out the method of this aspect of the invention: GRID (Goodford (1985) *J Med Chem* **28**, 849-857; available from Oxford University, Oxford, UK); MCSS (Miranker *et al* (1991) *Proteins: Structure, Function and Genetics* **11**, 29-34; available from Molecular Simulations, Burlington, MA); AUTODOCK (Goodsell *et al* (1990) *Proteins: Structure, Function and Genetics* **8**, 195-202; available from Scripps Research Institute, La Jolla, CA); DOCK (Kuntz *et al* (1982) *J Mol Biol* **161**, 269-288; available from the University of California, San Francisco, CA); LUDI (Bohm (1992) *J Comp Aid Molec Design* **6**, 61-78; available from Biosym Technologies, San Diego, CA); LEGEND (Nishibata *et al* (1991) *Tetrahedron* **47**, 8985;

available from Molecular Simulations, Burlington, MA); LeapFrog (available from Tripos Associates, St Louis, MO); Gaussian 92, for example revision C (MJ Frisch, Gaussian, Inc., Pittsburgh, PA ©1992); AMBER, version 4.0 (PA Kollman, University of California at San Francisco, ©1994); QUANTA/CHARMM (Molecular Simulations, Inc., Burlington, MA ©1994); and Insight II/Discover (Biosym Technologies Inc., San Diego, CA ©1994). Programs may be run on, for example, a Silicon Graphics™ workstation, Indigo^2™ or IBM RISC/6000™ workstation model 550.

Several *in silico* methods could be employed, for example, via a substructure search for new ligands using programmes such as CHEM DRAW or CHEM FINDER. The basic structure of the natural ligand (for example a phosphorylated hydrophobic motif peptide such as S6K-pHM) capable of binding to PDK1 (or other protein kinase) is taken (or predicted) and various structural features of it (for example the hydrophobic and negatively charged entities) are submited to a programme which will searches a set of chemical company catalogues for chemicals containing this substructure.

These compounds are then screened by eye for groups that could not interact with the PIF/phosphate binding pockets (or the αC residues/interacting region) because, for example, they are too large or have steric or charge hindrance, and those are discarded. The remaining chemicals are submitted to a PRODRG server and topologies/co-ordinates for these chemicals are created. These chemicals are modelled into the structure, from which chemicals that are possibly able to bind to the PIF/phosphate binding site domain/αC helix/interacting region are selected. Further details of the PRODRG programme are available at http://davapc1.bioch.dundee.ac.uk/programs/prodrg/prodrg.html.

These compounds may then be ordered or synthesised and assessed, for one or more of ability to bind to and/or modulate PDK1 (or other protein kinase) activity. The compounds may be crystallised with the PDK1 or other protein kinase protein and the structure of any complex determined.

An alternative approach is to use PRODRG: a tool for generating GROMOS/MOL2/WHATIF topologies and hydrogen atom positions from small molecule PDB files. We take the natural ligand and computationally vary all possible groups at each site on the ligand, with a variety of new groups while the protein co-ordinates and the ligand back-bone co-ordinates remain fixed the results can then be screened for hindrance and repulsion, and the molecules are obtained either through catalogues or made.

As noted above, the selected or designed compound may be synthesised (if not already synthesised) or purified and tested for its effect on the relevant hydrophobic/phosphate pocket-containing protein kinase, for example its effect on the protein kinase activity. The compound may be tested in a screening method of the invention or other screening method. The compound may be formulated for pharmaceutical use, for example for use in *in vivo* trials in animals or humans, or for use in agriculture, for example as an antifungal agent.

It may be useful to analyse a protein kinase structure (for example a structure determined or predicted for a complex of the protein kinase with a binding partner) in order to determine the activation state of the structure. This may be useful in further modelling binding of the binding partner to the protein kinase in other activation states, and in predicting how the binding partner may affect the activation state of the protein kinase or compete with other potential binding partners. It may also be useful in designing and assessing derivatives of the binding partner.

Thus, a further aspect of the invention provides a method for assessing the activation state of a structure for a protein kinase, wherein the structure is analysed using principle component analysis of the structure co-ordinates. The method may further comprise the step of classifying the activation state of the structure as "open", "closed" or "intermediate". Details of the analysis, which involves the generation of eigenvectors and associated eigenvalues are given in Example 1. The analysis makes use of techniques described in Amadei *et al* (1993) Essential dynamics of proteins. *Proteins* 17, 412-425.

The hydrophobic/phosphate pocket-containing protein kinase may be PDK1. Alternatively, it may be an isoform of Serum and Glucocorticoid stimulated protein kinase (SGK), Protein Kinase B (PKB), p70 S6 kinase, p90 RSK, PKC isoforms (for example PKCα, PKCδ, PKCζ), PRK1, PRK2, MSK1 or MSK2. Hydrophobic/phosphate pocket-containing protein kinases and their EMBL database accession numbers are listed in Table I. Sequences considered to form the phosphate binding pocket from representative hydrophobic/phosphate pocket-containing protein kinases are shown in Figure 5. All AGC family protein kinases other than PKA may be hydrophobic/phosphate pocket-containing protein kinases, as defined above. In addition to the protein kinases shown in Figure 7, rhodopsin and G-protein coupled receptor protein kinases, for example, may possibly also have a hydrophobic/phosphate pocket as defined above.

The terms SGK, PKB, p70 S6 kinase, p90 RSK, PKCα, PKCδ, PKCζ or PRK2, for example, as used herein include a polypeptide (a SGK, PKB, PKA, p70S6 kinase, p90 RSK, PKCα, PKCδ, PKCζ or PRK2 polypeptide) comprising the amino acid sequence identified as a SGK, PKB, p70 S6

kinase, p90 RSK, PKCα, PKCδ, PKCζ or PRK2, respectively, in the relevant EMBL database records indicated in Table 2.

Table 2

	Activation or T-Loop	AGC Hydrophobic Motif	Accession number
consensus:	TFCGTxxYxAPD L E	FxxFSY YTF	
PKBα	TFCGTPEYLAPE	FPQFSY	(Y15056)
PKBβ	TFCGTPEYLAPE	FPQFSY	(P31751)
PKBγ	TFCGTPEYLAPE	FPQFSY	(AF135794)
SGK1	TFCGTPEYLAPE	FLGFSY	(AAD41091)
SGK2	TFCGTPEYLAPE	FLGFSY	(AF169034)
SGK3	TFCGTPEYLAPE	FLGFSY	(AF169035)
PKCα	TFCGTPDYIAPE	FEGFSY	(4506067)
PKCβI	TFCGTPDYIAPE	FAGFSY	(4506069)
PKCβII	TFCGTPDYIAPE	FEGFSF	(P05127)
PKCγ	TFCGTPDYIAPE	FGGFTY	(P05129)
PKCδ	TFCGTPDYIAPE	FAGFSF	(5453970)
PCKζ	TFCGTPNYIAPE	FEGFEY	(4506079)
PKCι	TFCGTPNYIAPE	FEGFEY	(4506071)
PRK1	TFCGTPEFLAPE	FLDFDF	(AAC50209)
PRK2	TFCGTPEFLAPE	FRDFDY	(AAC50208)
p70-S6Kα	TFCGTIEYMAPE	FLGFTY	(AAA36410)
p70-S6Kβ	TFCGTIEYMAPE	FLGFTY	(4506739)
p90-RSK1	SFCGTVEYMAPE	FRGFSF	(I38556)
p90-RSK2	SFCGTVEYMAPE	FRDFSF	(P51812)
p90-RSK3	SFCGTIEYMAPE	FRGFSF	(CAA59427)

MSK1	SFCGTIEYMAPD	FQGYSF	(AAC31171)
MSK2	SFCGTIEYMAPE	FQGYSF	(AAC67395)
PDK1	SFVGTAQYVSPE	(1)	(AF017995)

Table 2. Alignment of the amino acid sequences surrounding the T-loop and the hydrophobic motif of AGC kinases. All the sequences and accession numbers are from human proteins. The underlined residues correspond to those that become phosphorylated. Footnotes: (1) PDK1 does not possess a hydrophobic motif.

It is preferred that the PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase) is a polypeptide which consists of the amino acid sequence of the protein kinase PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase as the case may be) sequence referred to above or naturally occurring allelic variants thereof. It is preferred that the naturally occuring allelic variants are mammalian, preferably human, but may alternatively be homologues from parasitic or pathogenic or potentially pathogenic organisms. Examples of such organisms and homologues, and of uses of modulators of such homologues are given in US patent application No 60/112,114, filed on 14 December 1998, and applications claiming priority therefrom, or in Casamayor *et al* (1999) *Curr Biol* **9**, 186-197.

The PDK1 may also be a polypeptide with the amino acid sequence of residues 51 to 359 or 404 (or 71 to 360) of full-length human PDK1; this may comprise the protein kinase domain of PDK1, as described in Example 2. The PDK1 (or SGK, PKB, PKA or p70 S6 kinase) may also be Myc epitope-tagged or His-tagged, as described in Example 1. The p70 S6 kinase, for example, may have a His tag at its N-terminus and/or may lack the carboxy terminal 104 residues (p70 S6K-T2). The PDK1 or SGK may

be a *Saccharomyces cerevisiae* homologue, for example Pkh1 or Pkh2 (PDK1 homologues) or Ypk1 or Yrk2 (SGK homologues), as described in Casamayor *et al* (1999) *Curr Biol* 9, 186-197.

It is particularly preferred, although not essential, that the variant or fragment or derivative or fusion of the PDK1, or the fusion of the variant or fragment or derivative has at least 30% of the enzyme activity of full-length human PDK1 with respect to the phosphorylation of full-length human PKBα on residue Thr308 or SGK1 on residue Thr 256 in either the presence or absence of PtdIns(3,4,5)P_3 or PtdIns(3,4)P_2. It is more preferred if the variant or fragment or derivative or fusion of the said protein kinase, or the fusion of the variant or fragment or derivative has at least 50%, preferably at least 70% and more preferably at least 90% of the enzyme activity of PDK1 with respect to the phosphorylation of PKBα or SGK1. However, it will be appreciated that variants or fusions or derivatives or fragments which are devoid of enzymatic activity may nevertheless be useful, for example by interacting with another polypeptide. Thus, variants or fusions or derivatives or fragments which are devoid of enzymatic activity may be useful in a binding assay, which may be used, for example, in a method of the invention in which modulation of an interaction of a mutated PDK1 of the invention and optionally also PDK1 with a interacting polypeptide or compound, for example an interacting polypeptide comprising the amino acid sequence motif Phe/Tyr-Xaa-Xaa-Phe/Tyr, for example Phe/Tyr-Xaa-Xaa-Phe/Tyr-Zaa-Phe/Tyr, for example Phe/Tyr-Xaa-Xaa-Phe/Tyr-Asp/Glu-Phe/Tyr or Phe/Tyr-Xaa-Xaa-Phe/Tyr-PhosphoSer/PhosphoThr-Phe/Tyr is measured.

It is preferred that the variant or fragment or derivative or fusion of the said hydrophobic/phosphate binding pocket-containing protein kinase, or the fusion of the variant or fragment or derivative comprises a hydrophobic

pocket and a phosphate binding pocket in the position equivalent to the hydrophobic and phosphate binding pocket of human PDK1, as discussed further below.

Equivalent preferences apply to a variant or fragment or derivative or fusion of the SGK, PKB, p70 S6 kinase, p90 RSK, PKCα, PKCδ, PKCζ or PRK2 (for example), or the fusion of the variant or fragment or derivative, with the substitution in relation to SGK, PKB and p70S6 kinase of the peptide substrate Crosstide (GRPRTSSFAEG), or for PKB and SGK of the peptide substrate RPRAATF; the subsitution in relation to PKA of the peptide substrate Kemptide (LRRASLG); the substitution in relation to PKC isoforms and PRK1/2 of histone H1; and the substitution in relation to MSK1/2 or p90-RSK1/2/3 of CREBtide (EILSRRPSYRK).

By "variants" of a polypeptide we include insertions, deletions and substitutions, either conservative or non-conservative. In particular we include variants of the polypeptide where such changes do not substantially alter the activity of the said polypeptide, for example the protein kinase activity of PDK1, as described above.

By "conservative substitutions" is intended combinations such as Gly, Ala; Val, Ile, Leu; Asp, Glu; Asn, Gln; Ser, Thr; Lys, Arg; and Phe, Tyr.

The three-letter amino acid code of the IUPAC-IUB Biochemical Nomenclature Commission is used herein, with the exception of the symbol Zaa (negatively charged amino acid). In particular, Xaa represents any amino acid. It is preferred that Xaa and Zaa represent a naturally occuring amino acid. It is preferred that at least the amino acids corresponding to the consensus sequences defined above are L-amino acids.

It is particularly preferred if the PDK1 (or SGK, PKB, PKA or p70 S6 kinase or other hydrophobic/phosphate binding pocket-containing kinase as defined above) variant has an amino acid sequence which has at least 65% identity with the amino acid sequence of PDK1 referred to above (or the sequence for SGK (including SGK1, 2 and 3), PKB, PKA or p70 S6 kinase, for example, as appropriate, referred to above), more preferably at least 70%, 71%, 72%, 73% or 74%, still more preferably at least 75%, yet still more preferably at least 80%, in further preference at least 85%, in still further preference at least 90% and most preferably at least 95% or 97% identity with the amino acid sequence defined above.

It is still further preferred if the PDK1 (or SGK, PKB, PKA or p70 S6 kinase or other hydrophobic/phosphate binding pocket-containing kinase, as defined above) variant has an amino acid sequence which has at least 65% identity with the amino acid sequence of the catalytic domain, particularly the residues forming the hydrophobic pocket, of PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase) in the appropriate sequence referred to above, more preferably at least 70%, 71%, 72%, 73% or 74%, still more preferably at least 75%, yet still more preferably at least 80%, in further preference at least 83 or 85%, in still further preference at least 90% and most preferably at least 95% or 97% identity with the amino acid sequence defined above. It will be appreciated that the catalytic domain of a protein kinase-related polypeptide may be readily identified by a person skilled in the art, for example using sequence comparisons as described below.

The percent sequence identity between two polypeptides may be determined using suitable computer programs, for example the GAP program of the University of Wisconsin Genetic Computing Group and it will be appreciated that percent identity is calculated in relation to polypeptides whose sequence has been aligned optimally.

The alignment may alternatively be carried out using the Clustal W program (Thompson *et al* (1994) *Nucl Acid Res* **22**, 4673-4680). The parameters used may be as follows:

Fast pairwise alignment parameters: K-tuple(word) size; 1, window size; 5, gap penalty; 3, number of top diagonals; 5. Scoring method: x percent.
Multiple alignment parameters: gap open penalty; 10, gap extension penalty; 0.05.
Scoring matrix: BLOSUM.

It is preferred that the PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase) is a polypeptide which consists of the amino acid sequence of the protein kinase PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase as the case may be) sequence referred to above or naturally occurring allelic variants thereof. It is preferred that the naturally occuring allelic variants are mammalian, preferably human, but may alternatively be homologues from parasitic or pathogenic or potentially pathogenic organisms. Examples of such organisms and homologues, and of uses of modulators of such homologues are given in US patent application No 60/112,114, filed on 14 December 1998, and applications claiming priority therefrom, or in Casamayor *et al* (1999) *Curr Biol* **9**, 186-197.

It is preferred that the PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase) is a polypeptide that is capable of interacting with a polypeptide comprising the amino acid sequence motif Phe/Tyr-Xaa-Xaa-Phe/Tyr, preferably Phe-Xaa-Xaa-Phe/Tyr, more preferably Phe-Xaa-Xaa-Phe, still more preferably Phe/Tyr-Xaa-Xaa-Phe/Tyr-Zaa-Phe/Tyr or Phe/Tyr-Xaa-Xaa-Phe/Tyr-COOH, for example the polypeptide PIF or PIFtide, as defined below. Further preferences for the said polypeptide are as given above.

The protein kinase activity of PKB, SGK or p70 S6 kinase that is modulated may be phosphorylation of the underlined residue in a polypeptide with the amino acid sequence Arg-Xaa-Arg-Xaa-Xaa-Ser/Thr. The polypeptide may be Glycogen Synthase Kinase 3 (GSK3), 40 S ribosomal subunit S6, BAD, 6-phosphofructo-2-kinase, phosphodiesterase3b, human caspase 9, endothelial nitric oxide synthase or BRCA1.

A compound identified by a method of the invention may modulate the ability of the protein kinase to phosphorylate different substrates, for example different naturally occuring polypeptides, to different extents. The compound may inhibit the protein kinase activity in relation to one substrate but may increase the protein kinase activity in relation to a second substrate. For example, the protein kinase activity of PDK1 may be modulated to a different extent for PKB when compared with SGK, p70 S6 kinase and/or PKC.

It will be appreciated that the modulatory, for example inhibitory action of a compound found to bind (or inhibit binding of a polypeptide or compound) to the protein kinase may be confirmed by performing an assay of enzymic activity (for example PDK1 and/or PDK2 protein kinase activity) in the presence of the compound.

By "hydrophobic pocket-containing protein kinase having a hydrophobic pocket (PIF binding pocket) in the position equivalent to the hydrophobic pocket of human PDK1 that is defined by residues including Lys115, Ile118, Ile119, Val124, Val127 and/or Leu155 of full-length human PDK1 and further having a phosphate binding pocket in the position equivalent to the phosphate binding pocket of human PDK1 that is defined by residues including Lys76, Arg131, Thr148 and/or Gln150," is meant a polypeptide

having an amino acid sequence identifiable as that of a protein kinase catalytic domain, and further having a predicted or determined three-dimensional structure that includes a hydrophobic pocket corresponding to the region indicated in Example 1 as the PIF binding pocket, and a pocket corresponding to the region indicated in Example 1 as the phosphate binding pocket. The hydrophobic pocket and phosphate binding pockets in PDK1 do not overlap with the ATP or phosphorylation site binding sites on PDK1.

It is preferred that the protein kinase has identical or conserved residues that are equivalent to Lys 115, Ile118, Ile119, Val124, Val127 and/or Leu 155 of human PDK1, more preferably at least Lys115 and Leu155 of human PDK1, most preferably an identical residue equivalent to Leu155. Thus, for example, the protein kinase may have a Lys residue at the position equivalent to Lys115 of PDK1 and/or a Leu residue at the position equivalent to Leu155 of PDK1. It is preferred that the protein kinase does not have an Ala at the position equivalent to Lys115 and/or a Ser, Asp or Glu at the position equivalent to Leu155 of PDK1.

It is further preferred that the protein kinase has identical or conserved residues that are equivalent to Lys76, Arg131, Thr148 and/or Gln 150 of human PDK1, more preferably at least Lys76 and Gln150 of human PDK1, most preferably an identical residue equivalent to Gln150. Figure 5B shows an alignment of examples of protein kinases considered to have a phosphate binding pocket at the position equivalent to the said phosphate binding pocket of PDK1. Sequence conservation/preferred residues at the positions identified are discussed further in Example 1.

An amino acid sequence may be identifiable as that of a protein kinase catalytic domain by reference to sequence identity or similarities of three

dimensional structure with known protein kinase domains, as known to those skilled in the art.

Protein kinases show a conserved catalytic core, as reviewed in Johnson *et al* (1996) *Cell*, **85**, 149-158 and Taylor & Radzio-Andzelm (1994) *Structure* **2**, 345-355. This core folds into a small N-terminal lobe largely comprising anti-parallel β-sheet, and a large C-terminal lobe which is mostly α-helical. A deep cleft at the interface between these lobes is the site of ATP binding, with the phosphate groups near the opening of the cleft.

Protein kinases also show conserved sequences within this catalytic core, and the residue equivalent to a given residue of, for example, PDK1, may be identified by alignment of the sequence of the kinase with that of known kinases in such a way as to maximise the match between the sequences. The alignment may be carried out by visual inspection and/or by the use of suitable computer programs, for example the GAP program of the University of Wisconsin Genetic Computing Group, which will also allow the percent identity of the polypeptides to be calculated. The Align program (Pearson (1994) in: Methods in Molecular Biology, Computer Analysis of Sequence Data, Part II (Griffin, AM and Griffin, HG eds) pp 365-389, Humana Press, Clifton).

The comparison of amino acid sequences or three dimension structure (for example from crystallography or computer modelling based on a known structure) may be carried out using methods well known to the skilled man, for example as described in WO 01/44497.

MAP kinase, MEK1, Cdk2 and Erk2 (for example) are not protein kinases having a hydrophobic pocket in the position equivalent to the hydrophobic (PIF binding) pocket of PDK1. MEK1, Cdk2 and ERK2 may have a larger

hydrophobic pocket which interacts with an amino acid sequence motif (which may be Phe-Xaa-Phe-Pro) which is not Phe-Xaa-Xaa-Phe. Thus, these protein kinases do not have a hydrophobic pocket in the position equivalent to the said hydrophobic (PIF-binding) pocket of PDK1.

A further aspect of the invention provides a mutated protein kinase, wherein the protein kinase before mutation has a hydrophobic pocket in the position equivalent to the hydrophobic pocket (PIF-binding pocket) of human PDK1 that is defined by residues including Lys115, Ile118, Ile119, Val124, Val127 and/or Leu155 of full-length human PDK1 and further has a phosphate binding pocket in the position equivalent to the phosphate binding pocket of human PDK1 that is defined by residues including Lys76, Arg131, Thr148 and/or Gln150, and wherein one or more residues equivalent to Ile118, Val124, Val127, Lys76 or Thr148 forming part of the hydrophobic pocket or phosphate binding pocket of the protein kinase is mutated. It is preferred that the said protein kinase is PDK1. The said protein kinase may alternatively be, for example, SGK, PKB or p70 S6 kinase. It is particularly preferred that the residue at the position equivalent to residue Lys76 of PDK1 is mutated to an Ala. The mutated protein kinase may be useful in determining whether a polypeptide or compound interacts with the hydrophobic (PIF binding) pocket or phosphate binding pocket of the unmutated protein kinase. For example, the abilities of a compound (including polypeptide) to bind to the mutated and unmutated protein kinase, or to modulate the activity of the protein kinase towards one or more substrates of the protein kinase, may be measured and compared.

A further aspect of the invention provides a polynucleotide encoding a mutated protein kinase of the invention. A still further aspect of the invention provides a recombinant polynucleotide suitable for expressing a

mutated protein kinase of the invention. A yet further aspect of the invention provides a host cell comprising a polynucleotide of the invention.

A further aspect of the invention provides a method of making a mutated protein kinase of the invention, the method comprising culturing a host cell of the invention which expresses said mutated protein kinase and isolating said mutated protein kinase.

A further aspect of the invention provides a mutated protein kinase obtainable by the above method.

Examples of these aspects of the invention are provided in Example 1, and may be prepared using routine methods by those skilled in the art, for example as described in WO 00/35946.

For example, the above mutated protein kinase may be made by methods well known in the art and as described below and in Example 1 or 2, for example using molecular biology methods or automated chemical peptide synthesis methods.

It will be appreciated that peptidomimetic compounds may also be useful. Thus, by "polypeptide" or "peptide" we include not only molecules in which amino acid residues are joined by peptide (-CO-NH-) linkages but also molecules in which the peptide bond is reversed. Such retro-inverso peptidomimetics may be made using methods known in the art, for example such as those described in Mézière *et al* (1997) *J. Immunol.* 159, 3230-3237, incorporated herein by reference. This approach involves making pseudopeptides containing changes involving the backbone, and not the orientation of side chains. Retro-inverse peptides, which contain NH-CO

bonds instead of CO-NH peptide bonds, are much more resistant to proteolysis.

Similarly, the peptide bond may be dispensed with altogether provided that an appropriate linker moiety which retains the spacing between the Cα atoms of the amino acid residues is used; it is particularly preferred if the linker moiety has substantially the same charge distribution and substantially the same planarity as a peptide bond.

It will be appreciated that the peptide may conveniently be blocked at its N- or C-terminus so as to help reduce susceptibility to exoproteolytic digestion.

The invention further provides a method of identifying a compound that modulates the protein kinase activity of a protein kinase having a hydrophobic pocket and phosphate binding pocket in the positions equivalent to the hydrophobic (PIF binding) pocket and phosphate binding pocket of PDK1, as defined above (for example PDK1), comprising the step of determining the effect of the compound on the protein kinase activity of, or ability of the compound to bind to the said mutated protein kinase of the invention.

The method may further comprise determining the effect of the compound on the protein kinase activity of, or ability of the compound to bind to, the protein kinase (for example PDK1) which is not mutated at the said residue. When the protein kinase is PDK1, it may lack a functional PH domain (ie it may lack a PH domain capable of binding a phosphoinositide).

It will be appreciated that the protein kinase or mutated protein kinase may be a fusion protein comprising a tag, for example to aid purification, for example a GST tag, as described in Example 1.

The capability of the said PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase) polypeptide with regard to interacting with or binding to a polypeptide or other compound may be measured by any method of detecting/measuring a protein/protein interaction or other compound/protein interaction, as discussed further below. Suitable methods include methods analagous to those described in Example 1, as well as other methods, for example yeast two-hybrid interactions, co-purification, ELISA, co-immunoprecipitation and surface plasmon resonance methods. Thus, the said PDK1 (or SGK, PKB, PKA or p70 S6 kinase) may be considered capable of binding to or interacting with a polypeptide or other compound if an interaction may be detected between the said PDK1 polypeptide and the said interacting polypeptide by ELISA, co-immunoprecipitation or surface plasmon resonance methods or by a yeast two-hybrid interaction or copurification method, for example as described in Example 1.

It is preferred that the interaction can be detected using a surface plasmon resonance method, as described in Example 1. The interacting polypeptide (for example a polypeptide comprising a phosphorylated "hydrophobic motif", for example S6K-pHM; see example 1) may be immobilised on the test surface, for example it can be coupled through amino groups to a SensorChip CM5™, according to the manufacturer's instructions, or a biotinylated polypeptide can be bound to an avidin coated SensorChip SA. The protein kinase (at concentrations between, for example 0 and between 10μM and 1.0μM, for example 2μM) is then injected over the surface and steady state binding determined in each case. From these measurements a K_d can be determined. It is preferred that the interaction has a K_d of less than 8μM, more preferably less than 5μM, 2μM, 1μM, 500nM, 300nM, 200nM or 100nM, for example about 150nM. Alternatively, a K_d can be determined for a polypeptide or other compound in competition with the immobilised polypeptide (or other compound). The protein kinase (for

example at a concentration of 0.5μM) is mixed with free polypeptide (for example, at concentrations between 0 and 3μM) and the mixture injected over the immobilised polypeptides. The steady state binding is determined in each case, from which the K_d of the interaction can be determined using the Cheng-Prescott relationship. Alternatively, the interaction may be expressed in terms of an observed response or relative observed responses, measured in terms of mass of protein bound to the surface, as described in Example 2. For example, the polypeptide may be immobilised by amino coupling to a SensorChip CM5 and each protein kinase (for example different mutated protein kinases, as discussed below) for example at a concentration of 1.0μM or a range of concentrations, injected over the immobilised polypeptide. Alternatively, the polypeptide may be immobilised on a SA SensorChip and each protein kinase, for example at a concentration of 40nM or a range of concentrations injected over the immobilised polypeptide. The steady state response for each protein kinase is determined, for example expressed in Response Units (RU). 1000RU corresponds to 1 ng/mm^2 of protein bound to the surface. A response of less than 10RU may indicate that no interaction has taken place. A response of at least 10RU may indicate that the immobilised and injected molecules interact with each other.

It will be appreciated that the above methods may be used to determine whether a particular polypeptide or compound interacts with a protein kinase or mutated protein kinase.

The effect of the compound on the rate or degree of phosphorylation of a hydrophobic pocket and/or phosphate binding pocket-dependent substrate may be determined. A compound may be selected that decreases the protein kinase activity of the said protein kinase, for example PDK1, towards a hydrophobic pocket-dependent substrate or a phosphate binding

pocket-dependent substrate and does not affect or increases the protein kinase activity towards a hydrophobic pocket or phosphate binding pocket-independent substrate, for example PKB when the kinase is PDK1. An activator of PDK1 may mimic insulin and may be useful in treating diabetes or obesity, and may protect cells from apoptosis.

Compounds that bind specifically to the phosphate binding site may activate PDK1 (or other AGK kinase having a phosphate binding site). Also compounds that bind to the residues forming part of the pohsphate binding site might transduce the negative effect and inhibit the kinase activity. A compound interacting with the phosphate binding site of PDK1 may be an activator, but only of a subset of substrates. Some substrates of PDK1 require the interaction with the phosphate binding site, such as S6K and SGK.

To generate a specific molecule that could bind to the phosphate and/or PIF-binding pocket of PDK1 a anti-idiotype strategy using combinatorial RNA libraries could be employed. Previous studies have established that Combinatorial RNA libraries can be used to isolate specific ligands, called aptamers, for virtually any target molecule by a procedure probably best known as SELEX (Ellington, A. D., and Szostak, J. W. (1990) Nature 346, 818-822; Tuerk, C., and Gold, L. (1990) Science 249, 505-510). Using this approach RNA molecules that interact with antibodies raised against PIFtide or peptides that encompass the hydrophobic motif of AGC kinases which are phosphorylated at their hydrophobic motif would be selected (preferably antibodies that are specific for the phosphorylated form ie bind the phosphorylated form but not the non-phosphorylated form). These RNA species then may have the intrinsic conformation to interact with the phosphate binding (and possibly also the PIF-binding) pocket(s) of PDK1.

Antibodies to the phosphate binding pocket may be produced. For example, animals could be immunised with wild type PDK1. Serum could then be purified with a column where the resin is coated with wild type PDK1 used for the immunisation. Specific antibodies could then be passed through columns coated with mutant PDK1 molecules differing only in that they have specific mutations in the phosphate binding pocket, such as Arg131, Lys76 or Gln150, for example mutated to Ala. Antibodies that don't bind to this mutant will either be specific antibodies that recognise the specific motifs or antibodies that are sensitive to the conformational changes associated with these mutations. The opposite development could also be performed: antibodies against a mutant PDK1 having a specific mutation(s) in the phosphate binding pocket, such as Arg131, Lys76 or Gln150, for example mutated to Ala, could be produced and the serum further purified through columns coated with wild type PDK1.

Thus, a further aspect of the invention provides an antibody reactive with the phosphate binding pocket of PDK1 or other hydrophobic pocket (PIF binding pocket)-containing protein kinase having a hydrophobic pocket in the position equivalent to the hydrophobic pocket of human PDK1 that is defined by residues including Lys115, Ile118, Ile119, Val124, Val127 and/or Leu155 of full-length human PDK1 and further having a phosphate binding pocket in the position equivalent to the phosphate binding pocket of human PDK1 that is defined by residues including Lys76, Arg131, Thr148 and/or Gln150. A further aspect of the invention provides an antibody reactive with PDK1 or other phosphate-binding pocket–containing protein kinase as defined above but not with the said protein kinase mutated at the phosphate binding site, or *vice versa*. A further aspect of the invention provides a method for preparing or selecting an antibody wherein the antibody is prepared or selected against a said protein kinase (for example

PDK1) unmutated at the phosphate binding site and a said protein kinase mutated at the phosphate binding site.

By the term "antibody" is included synthetic antibodies and fragments and variants (for example as discussed above) of whole antibodies which retain the antigen binding site. The antibody may be a monoclonal antibody, but may also be a polyclonal antibody preparation, a part or parts thereof (for example an F_{ab} fragment or $F(ab')_2$) or a synthetic antibody or part thereof. Fab, Fv, ScFv and dAb antibody fragments can all be expressed in and secreted from *E. coli*, thus allowing the facile production of large amounts of the said fragments. By "ScFv molecules" is meant molecules wherein the V_H and V_L partner domains are linked via a flexible oligopeptide. IgG class antibodies are preferred.

Suitable monoclonal antibodies to selected antigens may be prepared by known techniques, for example those disclosed in "Monoclonal Antibodies: A manual of techniques", H. Zola (CRC Press, 1988) and in "Monoclonal Hybridoma Antibodies: techniques and Applications", JGR Hurrell (CRC Press, 1982), modified as indicated above. Bispecific antibodies may be prepared by cell fusion, by reassociation of monovalent fragments or by chemical cross-linking of whole antibodies. Methods for preparing bispecific antibodies are disclosed in Corvalen *et al,* (1987) *Cancer Immunol. Immunother.* **24**, 127-132 and 133-137 and 138-143.

A general review of the techniques involved in the synthesis of antibody fragments which retain their specific binding sites is to be found in Winter & Milstein (1991) *Nature* **349**, 293-299.

For example, an antibody that does not bind PDK1 Arg131Ala could be specifically recognising this residue in the phosphate binding site, but could

also be recognising specifically the inactive conformation of PDK1, which is stabilised by Arg 131. The opposite development could also be performed: antibodies against a mutant PDK1 Arg131Ala could be produced and the serum further purified through columns coated with wild type PDK1. In this way, antibodies may be prepared that would either not be able to interact with the phosphate binding site Arg 131 but only when a small residue is in its place, or antibodies that are probes for the active conformation of PDK1. These conformational probes could be used in high throughoutput screenings, HTS, in the search of compounds that are capable of modifying the conformation of the given protein kinase. Antibodies could have been produced with previous knowledge to detect active protein kinases by immunising with active protein kinases, but in those cases, the antibodies would have recognised also the phosphorylation events that make a protein kinase be active. In the methodology here described using antibodies, the conformational probes could be easily isolated. Furthermore, antibodies obtained from an active protein kinase (with overall modifications that make it active) could be further purified through a column coated with the inactive protein kinase (keeping the non bound fraction) and then further purifyied on a column coated with a protein kinase consisting of an activating mutation (such as R131A in the case of PDK1), retaining the specifically bound fraction, which could be an active conformation probe. This type of approach could also allow the development of conformation specific probes by the use of activating or inhibiting mutations.

A further aspect of the invention provides a kit of parts useful in carrying out a method according to the preceding aspect of the invention, comprising (1) a mutated protein kinase of the invention and (2) the protein kinase which is not a mutated said protein kinase as defined above.

The protein structures described herein (for example with the co-ordinates shown in Examples 2, 3 or 4, or structures modelled thereon) may be useful in designing further reagents that may be useful in drug screening assays or characterisation of protein kinase activity or regulation. For example, such structures may be useful in designing mutants that may be useful in FRET-based activities, for example in which surface residues near to binding sites are mutated to cysteines to allow coupling of chromophores. For example, the cysteine residue may be fluorescently-labelled, and a change in fluorescence intensity or frequency may be detected in an assay. Any thiol-reactive fluorophore, for example BADAN (see, for example, Wadum et al Fluorescently labeled bovine acyl-CoA binding protein – an acyl-CoA sensor. Interaction with CoA and acyl-CoA esters and its use in measuring free acyl CoA esters and non-esterified fatty acids (NEFA); Hammarstrom et al (2001) *Biophys J* **80(6)**, 2867-2885; Schindel *et al* (2001) *Eur J Biochem* **268(3)**, 800-808), could be used to label the cysteine. An alternative suitable fluorophore is Acrylodan (Richieri et al (1992) *J Biol Chem* **267(33)**, 23495-23501).

It will be appreciated that the invention provides screening assays for drugs which may be useful in modulating, for example either enhancing or inhibiting, the protein kinase activity of a protein kinase (for example, the protein kinase activity towards a particular substrate) having a hydrophobic pocket in the position equivalent to the hydrophobic pocket of Protein Kinase A (PKA) that is defined by residues including Lys76, Leu116, Val80 and/or Lys111 of full-length mouse PKA, for example PDK1, SGK, PKB, PKA or p70 S6 kinase, for example the PDK1 or PDK2 activity (as discussed above) of PDK1. The compounds identified in the methods may

themselves be useful as a drug or they may represent lead compounds for the design and synthesis of more efficacious compounds.

The compound may be a drug-like compound or lead compound for the development of a drug-like compound for each of the above methods of identifying a compound. It will be appreciated that the said methods may be useful as screening assays in the development of pharmaceutical compounds or drugs, as well known to those skilled in the art.

The term "drug-like compound" is well known to those skilled in the art, and may include the meaning of a compound that has characteristics that may make it suitable for use in medicine, for example as the active ingredient in a medicament. Thus, for example, a drug-like compound may be a molecule that may be synthesised by the techniques of organic chemistry, less preferably by techniques of molecular biology or biochemistry, and is preferably a small molecule, which may be of less than 5000 daltons. A drug-like compound may additionally exhibit features of selective interaction with a particular protein or proteins and be bioavailable and/or able to penetrate cellular membranes, but it will be appreciated that these features are not essential.

The term "lead compound" is similarly well known to those skilled in the art, and may include the meaning that the compound, whilst not itself suitable for use as a drug (for example because it is only weakly potent against its intended target, non-selective in its action, unstable, difficult to synthesise or has poor bioavailability) may provide a starting-point for the design of other compounds that may have more desirable characteristics.

It is appreciated that screening assays which are capable of high throughput operation are particularly preferred. Examples may include cell based

assays and protein-protein binding assays. An SPA-based (Scintillation Proximity Assay; Amersham International) system may be used. For example, beads comprising scintillant and a substrate polypeptide or interacting polypeptide may be prepared. The beads may be mixed with a sample comprising ^{32}P- or ^{33}P-γ-labelled PDK1 or other protein kinase or mutated protein kinase (as defined above) and with the test compound. Conveniently this is done in a 96-well or 384-well format. The plate is then counted using a suitable scintillation counter, using known parameters for ^{32}P or ^{33}P SPA assays. Only ^{32}P or ^{33}P that is in proximity to the scintillant, i.e. only that bound to the substrate or interacting polypeptide that is bound to the beads, is detected. Variants of such an assay, for example in which the substrate or interacting polypeptide is immobilised on the scintillant beads *via* binding to an antibody or antibody fragment, may also be used.

It will be understood that it will be desirable to identify compounds that may modulate the activity of the protein kinase *in vivo*. Thus it will be understood that reagents and conditions used in the method may be chosen such that the interactions between, for example, the said protein kinase and the interacting polypeptide, are substantially the same as between the human protein kinase and a naturally occuring interacting polypeptide comprising the said amino acid sequence. It will be appreciated that the compound may bind to the protein kinase, or may bind to the interacting polypeptide.

The compounds that are tested in the screening methods of the assay or in other assays in which the ability of a compound to modulate the protein kinase activity of a protein kinase, for example a hydrophobic pocket-containing protein kinase, as defined above, may be measured, may be compounds that have been selected and/or designed (including modified)

using molecular modelling techniques, for example using computer techniques.

A further aspect of the invention is a compound identified or identifiable by the above selection/design methods of the invention, for example an RNA molecule or antibody identifiable as defined above.

A still further aspect of the invention is a compound (or polypeptide or polynucleotide) of the invention or identified or identifiable by the above selection/design methods of the invention, for use in medicine. Conditions or diseases in which such compounds, polypeptides or polynucleotides may be useful are indicated below.

The compound (or polypeptide or polynucleotide) may be administered in any suitable way, usually parenterally, for example intravenously, intraperitoneally or intravesically, in standard sterile, non-pyrogenic formulations of diluents and carriers. The compound (or polypeptide or polynucleotide) may also be administered topically, which may be of particular benefit for treatment of surface wounds. The compound (or polypeptide or polynucleotide) may also be administered in a localised manner, for example by injection. The compound may be useful as an antifungal (or other parasitic, pathogenic or potentially parasitic or pathogenic organism) agent.

A further aspect of the invention is the use of a compound (or polypeptide or polynucleotide) as defined above in the manufacture of a medicament for the treatment of a patient in need of modulation of signalling by a protein kinase having a hydrophobic/phosphate binding pocket, as defined above, for example PDK1, SGK, PKB or p70 S6 kinase, for example insulin signalling pathway and/or PDK1/PDK2/SGK/PKB/p70 S6

kinase/PRK2/PKC signalling. The patient may be in need of inhibition of a said hydrophobic/phosphate binding pocket-containing kinase in an infecting organism, for example the patient may have a fungal infection for which treatment is required. The compound may inhibit the infecting organism's (for example fungal) hydrophobic/phosphate binding pocket-containing protein kinase, but may not inhibit the patient's equivalent hydrophobic/phosphate binding pocket-containing protein kinase.

A further aspect of the invention is a method of treating a patient in need of modulation of signalling by a protein kinase having a hydrophobic/phosphate binding pocket as defined above, for example PDK1, SGK, PKB or p70 S6 kinase, for example insulin signalling pathway and/or PDK1/PDK2/SGK/PKB/p70 S6 kinase/PRK2/PKC signalling, wherein the patient is administered an effective amount of a compound (or polypeptide or polynucleotide) as defined above.

A compound that is capable of reducing the activity of PKC, for example PKCβ, PRK1 or 2, PDK1 (ie the PDK1 and/or the PDK2 activity), PKB, SGK or p70 S6 kinase may be useful in treating cancer. PDK1, for example *via* PKB and/or SGK, may be capable of providing a survival signal that protects cells from apoptosis induced in a variety of ways (reviewed in Cross *et al* (1995) *Nature* **378**, 785-789 and Alessi & Cohen (1998) *Curr. Opin. Genetics. Develop.* **8**, 55-62). Thus, such compounds may aid apoptosis. Reduction of the activity of PDK1, PKB, SGK and/or p70 S6 kinase may promote apoptosis and may therefore be useful in treating cancer. Conditions in which aiding apoptosis may be of benefit may also include resolution of inflammation.

A compound is capable of increasing the activity of PDK1, PKB, SGK or p70 S6 kinase may be useful in treating diabetes or obesity, or may be

useful in inhibiting apoptosis. Increased activity of PDK1, PKB, SGK or p70 S6 kinase may lead to increased levels of leptin, as discussed above, which may lead to weight loss; thus such compounds may lead to weight loss. For example, such compounds may suppress apoptosis, which may aid cell survival during or following cell damaging processes. It is believed that such compounds are useful in treating disease in which apoptosis is involved. Examples of such diseases include, but are not limited to, mechanical (including heat) tissue injury or ischaemic disease, for example stroke and myocardial infarction, neural injury and myocardial infarction. Thus the patient in need of modulation of the activity of PDK1, PKB, SGK or p70 S6 kinase may be a patient with cancer or with diabetes, or a patient in need of inhibition of apoptosis, for example a patient suffering from tissue injury or ischaemic injury, including stroke.

Thus, a further aspect of the invention provides a method of treating a patient with an ischaemic disease the method comprising administering to the patient an effective amount of a compound identified or identifiable by the screening methods of the invention.

A still further invention provides a use of a compound identifiable by the screening methods of the invention in the manufacture of a medicament for treating an ischaemic disease in a patient.

Thus, a further aspect of the invention provides a method of treating a patient with an ischaemic disease the method comprising administering to the patient an effective amount of a compound identifiable by the screening methods of the invention.

If the patient is a patient in need of promotion of apoptosis, for example a patient with cancer, it is preferred that the compound of the invention that is

used in the preparation of the medicament is capable of reducing the activity of PDK1, PKB, SGK or p70 S6 kinase. If the patient is a patient with diabetes or a patient in need of inhibition of apoptosis, for example a patient with ischaemic disease, it is preferred that the compound of the invention that is used in the preparation of the medicament is capable of increasing the activity of PDK1, PKB, SGK or p70 S6 kinase.

All documents referred to herein are hereby incorporated by reference.

The invention is now described in more detail by reference to the following, non-limiting, Figures and Examples.

Figure legends

1. Overview of the PDK1 structure.

The PDK1 kinase domain backbone is shown in a ribbon representation, with the secondary structure elements for residues 74-163 in the lower half of the Figure and for residues 164- 358 in the upper part of the Figure. Helix αG, encompassing residues 287-295 (which makes a crystal contact to a symmetry related PDK1 molecule, Fig. 2), is at the bottom right of the Figure. Key residues discussed in the text are shown as a sticks model. ATP is shown as a sticks model. A simulated annealing |Fo –|Fc`, ϕ calc map is shown in black, contoured at 3 σ. The phosphoserine and the sulphate discussed in the text are also shown.

2. The PIF-pocket

A. A surface representation of the putative PIF binding pocket is shown and compared to the pocket interacting with the C-terminal FXXF motif in PKA. For PDK1, the αG helix of a symmetry-related molecule is shown as

a ribbon, in PKA the C-terminus is also shown as a ribbon. Aromatic amino acids buried in the pocket are shown as sticks; further side chains interacting with the pocket are also shown as sticks. Helix αC is also shown as a ribbon in both PDK1 and PKA (at bottom of images). In PDK1, the ordered sulphate ion and basic residues interacting with it are also shown.

B. A stereo image of the residues lining the PIF-pocket is shown. The PDK1 backbone is shown as a grey ribbon. Side chains are shown as sticks. Hydrogen bonds to the sulphate ion are shown as black dotted lines.

3. Structure-based sequence alignment

The sequences of PKA and PDK1 are aligned according to a structural.superposition performed in WHAT IF [Vriend, 1990]. Sequence numbering is according to PDK1. β -strands (arrows) and α -helices (bars) are shown for the PDK1 structure according to a DSSP [Kabsch and Sander, 1983] secondary structure assignment, and labelled consistent with the secondary structure element names proposed for PKA [Taylor and Radzioandzelm, 1994]. Residues lining the PIF-pocket are indicated with a black dot. Residues hydrogen bonding the sulphate ion are indicated by arrows. The PDK1 residues equivalent to Ser53 and Gly186 in PKA, are labelled with an asterisk.

4. PDK1 binding & activation studies

Binding and activation of wild type and mutant forms of PDK1 to a phosphopeptide derived from the hydrophobic motif of S6K1. The binding of the wild type (wt) PDK1 and indicated mutants to a phosphopeptide comprising the hydrophobic motif of S6K1 (S6K-pHM: SESANQVFLGFT*YVAPSV, where T* indicates phospho-threonine) was analysed by surface plasmon resonance as described in the Materials and Methods.

A. The sensor chip SA was coated with 12RUs of the biotinylated S6K-pHM peptide and the binding was analysed following injection of 270 nM wild type PDK1, PDK1 [T148A] and PDK1 [K76A]. No detectable binding to S6K-pHM was observed using PDK1 [R131A] or PDK1 [Q150] (data not shown).

B. As in **A.** except that binding was analysed over a range of PDK1 concentrations (2-2150nM). The response level at the steady state binding is plotted versus the log of the PDK1 concentration. The estimated Kd was obtained by fitting the data to a sigmoid curve using Kaleidagraph software. Kd for wild type PDK1 was 642 – 131 nM, PDK1 [T148A] was 64 – 7 nM and PDK1 [K76A] was 1744 – 167 nM. No detectable binding of PDK1 to the non-phosphorylated S6K-HM peptide (SESANQVFLGFTYVAPSV) was detected.with wild type PDK1or any of the mutants (data not shown).

C. Activation of the indicated forms of PDK1 by S6K-pHM and S6K-HM. PDK1 activity was measured using the peptide substrate (T308tide) in the presence of the indicated concentrations of S6K-pHM (closed circles) and S6K-HM (open circles) as described in the methods. Assays were performed in triplicate and similar results obtained in 2 separate experiments. The results are the average – SD for a single experiment.

5. Interactions of regulatory phosphates with the αC helix

A. The PDK1 backbone is shown as a ribbon, with helix α C in the centre of the view. Key residues are shown as sticks. The sulphate ion and the phosphate on the activation loop are also shown. A sticks model of ATP is shown. Hydrogen bonds are shown as black dotted lines.

B. Alignment of the amino acid sequence forming part of the phosphate pocket on PDK1 with the equivalent region of the indicated AGC kinases. Identical residues are denoted by white letters on a black background and similar residues by gray boxes. Arrows indicate the residues corresponding to Lys 76, Arg131, Thr148 and Gln150 of PDK1.

6. Essential dynamics

A. Projection of all available PKA crystal structures (labelled dots) and the PDK1 structure (diamond) onto the first two eigenvectors (i.e. the ones with the two largest eigenvalues) calculated from the PKA structures.

B. Graphic representation of the motion along the first eigenvector, generated by projecting two structures at -4 nm (black) and +4 nm (grey).

7. Alignment of AGC protein kinase family members.

Example 1: High resolution crystal structure of the human PDK1 catalytic domain defines the regulatory phosphopeptide docking site

The 3-Phosphoinositide Dependent Protein Kinase-1 (PDK1) plays a key role in insulin/growth factor induced signalling pathways through phosphorylation of downstream AGC-kinases such as Protein Kinase B/Akt and p70 ribosomal S6 kinase (S6K1). Here we describe the 2.0 Å crystal structure of the PDK1 kinase domain in complex with ATP. The structure defines the hydrophobic pocket termed the 'PIF-pocket'which plays a key role in mediating the interaction and phosphorylation of certain substrates such as S6K1. In the PDK1 structure, this pocket is occupied by an extensive crystallographic contact with another molecule of PDK1, reminiscent of the interaction of Protein Kinase A with the hydrophobic motif at its C-terminus. Previous studies have shown that phosphorylation of S6K1 at its C-terminal PIF-pocket-interacting motif, promotes the binding of S6K1 with PDK1, suggesting that there may be a phosphate docking site located nearby the PIF-pocket. Interestingly, close to the PIF-pocket on the PDK1 structure, there is an ordered sulphate ion, interacting

tightly with four surrounding side chains. The roles of these residues were investigated through a combination of site directed mutagenesis and kinetic studies, the results of which suggest that this region of PDK1 does indeed represent a phosphate dependent docking site. An analogous phosphate binding regulatory motif may participate in the activation of other AGC kinases.

Results & Discussion

Overall structure

The structure of the catalytic domain of PDK1 was solved by molecular replacement and refined to an R-factor of 0.19 (Rfree=0.22). PDK1 assumes the classic bilobal kinase fold (Fig. 1) and is similar to the only other AGC kinase structure solved, that of PKA (RMSD.of 1.0 Å on C α atoms with PDB entry 1STC [Prade et al., 1997]). The form of PDK1 that was crystallized comprised residues 51 to 359. The tip of the activation loop (residues 233-236) is disordered, as observed in other kinase structures [Johnson et al., 1996]. The N-terminus (residue 51-70), which is pointing into a large void generated by the crystallographic symmetry, is also disordered. In contrast, the N-terminal extension to the kinase domain of PKA assumes an amphipathic a -helix (termed αA-helix), and packs against the kinase core [Knighton et al., 1991]. The cluster of hydrophobic residues that mediates this interaction in PKA is not present in PDK1, suggesting that the N-terminus of PDK1 could have a different function from that of PKA. Interestingly, it has recently been shown that the N-terminus of PDK1 (residues 1-50) interacts with Ral guanine nucleotide exchange factors [Tian et al., 2002]. Thus, this region may assume a unique conformation in PDK1, which is not defined by the structure described here.

PDK1 was crystallised in the presence of ATP but in the absence of any divalent cations. In the early stages of the refinement well-defined density for the entire ATP molecule could be observed. ATP adopts a different conformation to that observed in other kinase-ATP complexes (Fig. 1). Perhaps due to the absence of divalent cations, the generally observed kink between the β and γ phosphate caused by the interaction with such an ion, is not seen in the PDK1 structure.

It is known that PDK1 can phosphorylate itself on residue Ser 241 in the activation loop and that this phosphorylation is required for PDK1 activity [Alessi et al., 1997]. Indeed, we observed density for a phosphate attached to this residue (Fig. 1), and extensive interactions are observed between this phosphoserine and residues from the C-terminal lobe and αC-helix (Fig. 1). The interaction between Ser241 and the C-terminal lobe is similar to the equivalent interactions in PKA but as discussed below the binding to the αC-helix differs.

The PIF-pocket

As outlined in the introduction, PDK1 was postulated to possess a pocket (the 'PIF-pocket') in the small lobe of its catalytic domain, required for the binding of PDK1 to the hydrophobic motif of its substrates [Biondi et al., 2000]. The PDK1 structure described here indeed reveals such a pocket, and shows that it lies in a location similar to the FXXF-binding pocket in PKA (Fig. 2). PDK1 residues Lys115, Ile118, Ile119 on the αB helix (Fig. 2), Val124, Val127 on the αC helix and Leu155 on β-sheet 5 form an approximately 5 Å deep pocket. Previous work has shown that mutation of Leu 155 to Glu abolishes the ability of PDK1 to interact with a peptide that encompasses the hydrophobic motif of PRK2 (PIFtide) [Biondi et al., 2000]

as well as with S6K1, SGK1, PKCζ and PRK2 [Balendran et al., 2000, Biondi et al., 2000]. In addition, mutation of Lys115, Ile119, Glu150, and Leu155 to alanine, reduced the affinity of PDK1 for PIFtide approximately 10-fold, but did not affect the ability to phosphorylate and activate S6K1 and SGK1 [Biondi et al., 2001]. These results are in agreement with the crystal structure of the PIF-pocket, since Leu155 is located at the center and the other residues line the wall of the pocket (Fig. 2). Interestingly, in our structure, the PIF-pocket is occupied by helix αG of a symmetry related molecule (Fig. 2). Tyr288 and Phe291 make hydrophobic contacts in this pocket with almost all pocket-lining residues, remarkably reminiscent of the interactions of the phenylalanines in the FXXF motif in PKA and their hydrophobic docking site in the equivalent region of the kinase domain (Fig. 2). In addition, residues Glu287, Gln292, Ile295 and Lys296 on the symmetry related loop also form contacts with residues lining the PIF-pocket. In total, 244 ^{2} Å of accessible surface is buried by this contact, suggesting this is a tight interaction. However, the significance of this interaction is not clear as an oligomerisation event for PDK1 has not been demonstrated in solution previously. Indeed both the isolated catalytic domain of PDK1 that was crystallised and full length PDK1 migrate in gel filtration chromatography as apparent monomeric species (data not shown).

The phosphate pocket

As outlined in the introduction, substrates of PDK1, such as S6K1, interact with the PIF-pocket of PDK1 with higher affinity when they are phosphorylated at their hydrophobic motif. This suggested that a regulatory phosphate binding site may be located close to the PIF-pocket. During refinement of the PDK1 structure, it became clear that next to the PIF-pocket another small pocket was present, occupied by a tetrahedral oxy-

anion (Fig. 2). As 2.0 M of sulphate was present in the crystallisation conditions, this was assigned as a sulphate ion. The ion interacts with four residues lining the pocket, namely Lys76, Arg131, Thr148 and Gln150. Because of its close proximity to the PIF-pocket (approximately 5Å) it is possible that this sulphate-occupied pocket could represent the binding site for the phosphate on the phosphopeptide. To investigate this further, we mutated Lys76, Arg131, Thr148 and Gln150 to Ala, in order to verify the contribution of each of these residues in enabling PDK1 to interact with a peptide encompassing the hydrophobic motif of S6K1, in which the residue equivalent to Thr412 was phosphorylated (termed S6K-pHM). A quantitative surface plasmon resonance based binding assay (Fig. 4A) showed that wild type PDK1 interacted with S6K-pHM, with a Kd of 0.6 μM with S6K-pHM but not detectably to the non-phosphorylated form of this peptide (S6K-HM). The PDK1[R131A] and PDK1[Q150A] mutants did not detectably interact with S6K-pHM in this assay (Fig. 4B), confirming that the interactions these residues make in the PDK1 structure are of key importance. The PDK1[K76A] mutant interacted with 3-fold lower affinity (Kd 1.7 μM) with S6K-pHM. The PDK1[T148A] mutant however possessed about 10-fold higher (Kd 0.06 μM) affinity for S6K-pHM than wild type PDK1. Moreover, the dissociation of PDK1[T148A] from S6K-pHM is markedly slower than that of wild type PDK1 or PDK1[K76A] (Fig 4A). These findings are unexpected as Thr148 is within hydrogen bonding distance of the sulphate (Fig. 2), but indicate that this residue may play a role in enabling the dissociation of PDK1 from S6K-pHM.

The binding of PDK1 to PIFtide stimulates up to 4-fold the rate at which PDK1 phosphorylates a small peptide that encompasses the activation loop motif of PKB (termed T308tide) [Biondi et al., 2000], indicating that occupancy of the PIF-pocket of PDK1 activates the enzyme. Similarly, the

binding of a phosphopeptide corresponding to the hydrophobic motif of RSK stimulated PDK1 activity 6-fold [Frodin et al., 2000]. We have now also found that the binding of S6K-pHM to wild type PDK1 induces a maximal 5-fold activation, with a half maximal activation occurring at a concentration of approximately 50 μM S6K-pHM (Fig. 4C). We next assayed the specific activities of PDK1[K76A], PDK1[R131A], PDK1[T148A] and PDK1[Q150A] mutants in the absence and presence of increasing concentrations of S6K-pHM (Fig. 4C). The PDK1[K76A] possessed the same specific activity towards T308tide in the absence of S6K-pHM as wild type PDK1, but an approximately 3-fold higher concentration of S6K-pHM was required to half maximally activate PDK1[K76A], consistent with the reduced affinity of this form of PDK1 for S6K-pHM (Fig. 4A,B). The PDK1[R131A] mutant possessed a 3-fold higher specific activity towards Thr308tide in the absence of S6K-pHM (Fig. 4C), as has been observed previously with certain other PIF-pocket mutants of PDK1(PDK1[K115A] and PDK1[L155E]) [Biondi et al., 2000]. However, in accordance with the inability of PDK1[R131A] to bind S6K-pHM in the Biacore assay (Fig. 4B), it was not significantly activated by concentrations of S6K-pHM below 0.1 mM and its activity was only moderately further increased by the addition of high concentrations (0.3 and 1 mM) of S6K-pHM (Fig. 4C). The activity of a mutant of PDK1 in which both Lys76 and Arg131 were changed to Ala was activated even less significantly by these high concentrations of S6K-pHM. The PDK1[T148A] and PDK1[Q150A] mutants possessed similar specific activity towards T308tide as wild type PDK1 in the absence of S6K-pHM. The PDK1[T148A] mutant was activated similarly as wild type PDK1 by S6K-pHM and consistent with the inability of PDK1[Q150A] to interact with S6K-pHM, this mutant of PDK1 was not significantly activated by concentrations of S6K-pHM below 0.1 mM but at 0.3 and 1 mM peptide a 2-3 fold activation was observed (Fig. 4).

At very high peptide concentrations (0.3-1 mM) the non-phosphorylated S6K-HM peptide induced a small (<2-fold) activation of PDK1 (Fig. 4C). Interestingly, despite the PDK1[K76A] and PDK1[R131A] mutants being markedly less able to interact with the phosphorylated S6K-pHM peptide, than wild type PDK1, high concentrations of the S6K-HM peptide activated PDK1[K76A] and PDK1[R131A] to a similar extent as wild type PDK1, indicating that the ability of these mutants to interact weakly with the S6K-HM peptide was not affected.

We evaluated the sequence conservation in the phosphate pocket of the insulin/growth factor-activated AGC family kinases (PKBα , S6K1, SGK1 and RSK1). Sequence alignments indicate that this pocket is conserved amongst these kinases (Fig 5A). The most conserved residue is Gln150 which is found in all of these AGC kinases and the residue equivalent to Lys76 is always a basic residue (Fig. 5A). Arg131 is conserved in S6K1, SGK1 and RSK1 but not in PKBα , or PKBβ or PKBγ , where it is an Asn or Ser. Thr148 is conserved in PKBα and SGK1 but is an Ala in S6K1 and RSK1. Interestingly, we have found the Thr 148Ala mutation in PDK1 did not disrupt the phosphate pocket (Fig 4). As PKBα , S6K1, SGK1 and RSK1 require to be phosphorylated at their hydrophobic motif to be maximally activated, it is tempting to speculate that the C-terminal hydrophobic motifs of these enzymes, when phosphorylated, bind to their own PIF/phosphate pockets, thereby generating a network of interactions similar to that of PDK1. In support of this, PKBα , S6K1, SGK1 and RSK1 also require phosphorylation of their activation loop at the position equivalent to Ser241 for activity. Consistent with PKA not possessing a phosphate pocket, Lys76 and Gln150 are not conserved in PKA (Fig. 3), and indeed such a pocket is not observed in the PKA structure (Fig. 2).

The αC helix

The PDK1 structure shows that, as in other protein kinases [Johnson et al., 2001, Husen and Kuriyan, 2002], the αC helix (residues 124-136) is a key signal integration motif in the kinase core. One turn of the PDK1 αC helix (residues 129-131, Figs. 3, 5) links together the N-terminal lobe, the C-terminal lobe and the active site. Arg129 points towards the activation loop and forms two hydrogen bonds with the phosphorylated Ser241, whereas Arg131 forms two hydrogen bonds with the sulphate in the phosphate pocket (Fig. 5). Glu130 coordinates Lys111 which forms a hydrogen bond with the α-phosphate of the bound ATP. This interaction is conserved in all protein kinases and shown to be crucial for activation [Johnson et al., 2001, Husen and Kuriyan, 2002]. An additional residue, His126, forms a third hydrogen bond with the phosphorylated Ser241. Val124 and Val127 on the αC helix are involved in formation of the PIF-pocket (Fig. 5).

The αC helix provides a structural link between the putative phosphopeptide binding pocket and the phosphoserine in the activation loop. The fact that R131A has higher basal activity than wild type PDK1 may indicate that this residue plays tuning role in the PDK1 structure, not only participating in the activation of PDK1 in the presence of a phosphate ion, but also on keeping the equilibrium of the enzyme towards an inactive conformation in the absence of S6K-pHM. To our knowledge this is the first report of a kinase structure in which the αC helix is positioned by 2 regulatory phosphate binding sites on either side of the helix (Fig 5). This provides a possible sensor-mechanism for linking the phosphorylation-state of the activation loop and the phosphopeptide binding event in the PIF-pocket to PDK1 activity.

Activation state

All structures of PKA solved to date show a phosphorylated T-loop and are therefore assumed to be in an active state. In addition to the unphosphorylated versus phosphorylated states of PKA, there appear to be two main conformational states possible for the latter [Zheng et al., 1993, Johnson et al., 2001]. In the active, closed conformation, all residues are positioned to facilitate phosphoryl transfer. In contrast, the inactive, open conformation is seen in absence of a nucleotide, and differs from the closed conformation by conformational changes of the N-terminal and C-terminal domains with respect to each other. In addition, three 'intermediate' structures were described from PKA, having either adenosine (PDB entry 1BKX [Narayana et al., 1997]) or the inhibitors staurosporine (PDB entry 1STC [Prade et al., 1997]) and balanol (PDB entry 1BX6 [Narayana et al., 1999]) in the ATP-binding site. Taylor and colleagues have described a method to distinguish between the active and inactive conformations, based on three distances: His87-pThr197 (αC helix positioning), Ser53-Gly186 (opening of the glycine-rich loop) and Glu170-Tyr330 (C-terminal tail distance to active site) [Johnson et al., 2001]. In PDK1, only one of these distances, the opening state of the glycine rich loop, can be measured due to sequence conservation (Fig. 3). This distance is 12.4 Å , similar to a PKA intermediate conformation (this distance in PKA is 14.2Å for the open, 11.8 Å for intermediate and 10.0 Å for the closed conformation [Johnson et al., 2001]). To allow a more direct comparison of the PDK1 structure with the available PKA structures, we have analysed the conformational state of PDK1 in detail using a novel approach, which involves a principal component analysis (also called ''essential dynamics'' [Amadei et al.,1993]) of the crystallographic coordinates. In short, this involves the construction of a covariance matrix containing the correlations between atomic shifts (with respect to an average structure) in the ensemble of all available PKA crystal structures. Diagonalisation of this matrix gives eigenvector/eigenvalue sets which describe concerted shifts of atoms

(eigenvectors) together with the corresponding mean square fluctuation of the structures (eigenvalues). This approach allows a condensed description of PKA conformational states using only a few degrees of freedom, as shown previously for a range of other proteins [van Aalten et al., 1997,van Aalten et al., 2000,deGroot et al., 1998]. Diagonalisation of a covariance matrix built from the backbone atoms of residues 37-196, 198-283 and 286-305 results in a set of eigenvectors that describe concerted motions of the PKA backbone. In Fig. 6A, all PKA structures are projected on a subspace spanned by the first two eigenvectors (i.e. those with the two largest eigenvalues). It appears that the PKA structures cluster in three main areas along the first eigenvector. On the left of the average structure (which by definition has a projection of 0.0 on all eigenvectors) are the structures that are known to be in the "open" conformation (Fig. 6A). Around the average structure lie the structures that have been shown to be in an "intermediate" conformation (complexes with the inhibitors staurosporine, balanol and adenosine). More to the right of the average structure are the PKA structures that are known to be in the "closed" conformation. Thus, we have captured the conformational state of PKA in a single variable, the translation along the first eigenvector. This is further clarified by investigation of the atomic shifts described by this eigenvector in Cartesian space (Fig. 6B). A hinge-bending motion is observed between the N-terminal and C-terminal lobes, opening and closing the active site. It is now possible directly to compare the PDK1 conformational state by projecting the structure (backbone atoms only) onto the PKA eigenvectors. Fig. 6A shows that the conformation of PDK1 is close to the PKA structures that are in an "intermediate" conformation, consistent with the other structural analyses described above.

Conclusions

We have reported the structure of the PDK1 catalytic domain, which, although similar to PKA, has revealed important features that increase our understanding of the mechanism by which PDK1 is regulated. The structure, together with mutational analyses, defines a phosphopeptide binding pocket, consisting of a separate hydrophobic PIF-pocket and a phosphate binding site, which mediates the interaction of PDK1 with the phosphorylated hydrophobic motif of S6K. This is consistent with the previous hypothesis that phosphorylation of S6K and SGK [Biondi et al., 2001] as well as RSK [Frodin et al., 2000] at their FXXFS/T hydrophobic motif is the trigger for their interaction and phosphorylation by PDK1. In this mechanism the PIF-pocket would physiologically only interact with the Phe residues when the Ser/Thr residue is phosphorylated. Furthermore, as the phosphate pocket is conserved in other AGC kinases, the structural features and network of interaction of the phosphate pocket with the αC-helix on PDK1, could provide insight into the mode of activation of other AGC kinases.

Experimental Procedures

Materials

Mammalian and Insect cells culture reagents were from Life Technologies. SensorChips SA were from BiaCore AB. Glutathione Sepharose, as well as pre- packed HiTrap Q HP and Hiload Superdex 200 prep grade columns were from Amersham Biosciences. Dialysis cassettes were from the Slide-A-Lyzer series (Pierce). Ni-NTA Agarose was from Qiagen. Disposable ultrafiltration devices (polyethersulfone membranes) were from Vivascience. Crystallisation research tools (primary screens, additive

screens and crystallisation plates) were from Hampton Research. Peptides were synthesised by Dr G. Blomberg (University of Bristol, UK).

General methods

Molecular biology techniques were performed using standard protocols. Site directed mutagenesis was performed using a QuickChange kit (Stratagene) following instructions provided by the manufacturer. DNA constructs used for transfection were purified from bacteria using Qiagen plasmid Mega kit according to the manufacturer's protocol, and their sequence verified. Human kidney embryonic 293 cells were cultured on 10 cm diameter dishes in Dulbecco's modified Eagle's medium containing 10% foetal bovine serum.

Buffers

Low Salt Buffer: 25mM Tris-HCl pH 7.5, 150 mM NaCl; High Salt Buffer: 25mM Tris-HCl pH 7.5, 500 mM NaCl. Lysis Buffer: 25mM Tris-HCl pH 7.5, 150 mM NaCl 0.07% β -mercaptoethanol, 1mM Benzamidine, and 20 μg/ml PMSF. Buffer A: 50 mM Tris-HCl pH 7.5, 1 mM EGTA, 1 mM EDTA, 1% (by mass) Triton-X 100, 1 mM sodium orthovanadate, 50 mM sodium fluoride, 5 mM sodium pyrophosphate, 0.27 M sucrose, 1 μM microcystin-LR, 0.1% (by vol) β -mercaptoethanol and "complete" proteinase inhibitor cocktail (one tablet per 50 ml, Roche). Buffer B: 50 mM Tris/HCl pH 7.5, 0.1 mM EGTA, 10 mM β -mercaptoethanol and 0.27 M sucrose.

Expression, purification and characterisation of the kinase domain of PDK1

A cDNA encoding for human PDK1 amino acid residues 51-359 with a stop codon inserted at position 360, was amplified by PCR reaction using full length human PDK1 cDNA in the pCMV5 vector [Alessi et al., 1997] as a template a 5'primer, which incorporates a *Bam*H1 restriction site, an initiating methionine, a hexahistidine tag.followed by a PreScission protease recognition sequence prior to the residue equivalent to Met51 of PDK1 (ggatcctataaatatggcacatcatcatcatcatctggaagttctgttccaggggcccatggacggcact gcagccgagcctcgg) and the 3' primer applied in this reaction was: 5'-ggatcctcaggtgagcttcggaggcgtctgctggtg-3'. The resulting PCR product was ligated into pCR 2.1 TOPO vector (Invitrogen) and then subcloned as a *Bam*H1-*Bam*H1 fragment into pFastbac1 vector (Life Technologies) for baculovirus protein expression. The resulting construct was then used to generate recombinant baculovirus using the Bac-to-Bac system (Life Technologies) following the manufacturer's protocol. The resulting baculoviruses were used to infect Sf21 cells at 1.5 x 106/ml. The infected cells were harvested by centrifugation 72 hours post infection. Cell pellets corresponding to 7 l of culture were resuspended in 900 ml of Lysis Buffer and cells lysed in nitrogen cavitation chamber. Cell debris was then pelleted by centrifugation, the supernatant made 0.5 M NaCl by addition of 4M NaCl and then incubated with Ni-NTA-Agarose (10 ml resin) for one hour. The resin was then washed in 10 times with 40 ml of Lysis Buffer containing 0.5M NaCl and then placed in a disposable Econo-Pac column (BioRad), where the resin was further washed with 700 ml of high salt buffer and then with 100 ml of low salt buffer, both supplemented with 10 mM imidazole. Elution was performed with 200 mM imidazole in high salt buffer and 2 ml fractions were collected. Fractions containing protein were pooled, diluted to 200 mM NaCl with 25 mM Tris/HCl pH 7.5, and loaded onto a 5 ml Hi-trap Q sepharose column. The flow-through from this step, containing PDK1, was concentrated to 4 ml and then chromatographed on a 16/60 Superdex 200 gel filtration column using an AKTA Explorer system

(Amersham Biosciences) equilibrated with high salt buffer with the addition of 1mM DTT. PDK1 eluted in a large symmetric peak at the expected size for a monomer. The PDK1 containing peak was again pooled, concentrated and incubated with 300 μg GST-PreScission protease (expression construct kindly provided by John Heath, University of Birmingham, UK) on ice for 4h. In order to eliminate the cleaved His-tag sequences as well as any remaining uncleaved His-PDK1 and the GST-PreScission protease, the mixture was incubated with a mixture of 200 μl glutathione-Sepharose and 200 μl Ni-NTA agarose resin for 15 minutes and the PDK1 protein that did not bind was collected. The resulting protein consists of PDK1 (51-359) preceded by a Gly-Pro at the N-terminus. The protein at this stage of the purification was apparently homogeneous as revealed by a single band after electrophoresis of 20 μg of protein on SDS-PAGE and staining with Coomasie Brilliant Blue R250 (data not shown).

Electrospray mass spectrometry revealed a main peak mass close to the expected size of this fragment of PDK1. The specific activity of PDK1 (51-359) towards the peptide T308tide and its activation in the presence of PIFtide was identical to wild type full length PDK1 [Biondi et al., 2000], and tryptic peptide mass finger printing indicated that PDK1 was quantitatively phosphorylated at Ser241 (data not shown). In BiaCore experiments, the steady state binding of PDK1 (51-359) to the peptide PIFtide was similar to that of the His-tag PDK1 (51-556) protein characterised previously [Balendran et al., 1999a].

Crystallisation and data collection

The PDK1 (51-359) protein was concentrated to a final concentration of 8.5 mg/ml (as determined by a Bradford assay using bovine serum albumin as a

standard). The sitting drop vapour diffusion method was used for producing crystals. Sitting drops were formed by mixing 1 µl of protein solution with 1 µl of a mother liquor solution (0.1 M Tris/HCl pH 8.5, 2.0 M ammonium sulphate, 16.6 mM ATP) with the addition of 0.2 µl EDTA (100mM). Hexagonal crystals (Table I) of PDK1 were grown at 20° C from a mother liquor containing 0.1M Tris/HCl pH 8.5, 2.0 M ammonium sulphate, 16.6 mM ATP). Crystals appeared after one day, growing to 0.05 x 0.05 x 0.2 mm over 20 days. Crystals were frozen in a nitrogen gas stream after being soaked in 0.075 M Tris 8.5, 1.5M ammonium sulphate, 25% (v/v) glycerol.

Expression and purification of wild type and mutant forms of GST-PDK1.

Wild type-PDK1 [Alessi et al., 1997], PDK1[R76A], PDK1[R131A], PDK1[R76A,R131A], PDK1[T148A] and PDK1[Q150A] in the pEBG2T vector were used to express the wild type and indicated mutants of PDK1 fused through their N-terminus to glutathione S-transferase (GST). The GST fusion proteins were expressed in human embryonic kidney 293 cells. For the expression of each construct, twenty 10 cm diameter dishes of 293 cells were cultured and each dish transfected with 10 µg of the pEBG-2T construct, using a modified calcium phosphate method. 36 h post-transfection, the cells were lysed in 0.6 ml of ice-cold Buffer A, the lysates pooled, centrifuged at 4 ° C for 10 min at 13000 g and the GST-fusion proteins were purified by affinity chromatography on glutathione-Sepharose and eluted in Buffer B supplemented with 20 mM glutathione as described previously [Alessi et al., 1997]. Typically between 1 and 2mg of each GST-fusion protein was obtained and each protein was more than 75 judged by SDS polyacrylamide gel electrophoresis (data not shown).

PDK1 catalytic activity measurements

The ability of wild type and mutant PDK1 to phosphorylate the synthetic peptide T308tide (KTFCGTPEYLAPEVRR ([Biondi et al., 2000]) was carried out in 30 µl assays containing 100 ng of wild type or mutant PDK1, 50 mM Tris/HCl pH 7.5, 0.1% β -mercaptoethanol, 10 mM $MgCl_2$, 100 µM [32γ P]ATP (200 cpm/pmol) , 0.5 µM microcystin-LR, 1 mM T308tide in the presence or absence of the indicated concentrations of the S6K-pHM peptide (SESANQVFLGFT(P)YVAPSV) or S6K-HM.peptide (SESANQVFLGFTYVAPSV). After incubation for 10 min at 30 ° C, 25 µl of the resultant mixture was spotted into P81 phosphocellulose paper (2 x 2 cm) and the papers washed and analysed as described previously for assays of MAP kinase. Control assays were carried out in parallel in which either PDK1, or peptide substrate were omitted; these values were always less than 5% of the activity measured in the presence of these reagents. One Unit of PDK1 activity was defined as that amount required to catalyse the phosphorylation of 1 nmol of the T308tide in 1 min.

Biacore analysis

Binding was analysed in a BiaCore 3000 system (BiaCore AB, Stevenage, UK). Biotinylated S6K-pHM (Biotin-C_{12}- SESANQVFLGFT(P)YVAPSV) or the non-phosphorylated form of this peptide S6K-HM was bound to an streptavidin- coated Sensor chip (SA) (12 response units, RU). 30 µl of wild type or the indicated mutant GST-PDK1 were injected at a flow rate of 30µl/min, in buffer HBS-P (10 mM HEPES pH 7.4, 0.15M NaCl, 0.005% (by vol) polysorbate-20) supplemented with 1 mM DTT. Specific interactions between S6K-pHM and PDK1 proteins were obtained between the concentration range of 2-2150 nM PDK1. Steady state binding was

determined at each concentration. Dissociation of PDK1 from the phospho-peptide was monitored over a 1min period. Regeneration of the sensor chip surface was performed with 10□µl injections of 0.05% SDS. As previously found for PDK1 binding to PIFtide [Biondi et al., 2000], the interaction data obtained using BiaCore did not fit to simple 1:1 interaction model. Apparent Kd values were estimated from the concentration of PDK1 which gives 50% of maximal response, which was obtained empirically using GST-PDK1[T148A] (RUmax=435). For all PDK1 construct tested, the off rates for S6Kp-HM were high in comparison to those of PIFtide binding with the time taken for 50% dissociation to occur for S6K-pHM is 30s compared to 1000s for PIFtide. This could account for the overall approximately 100-fold lower affinity of wild type PDK1 for S6K-pHM in comparison to PIFtide.

Data collection, structure solution, and refinement

Data on PDK1 crystals were collected at the European Synchrotron Radiation Facility (Grenoble, France) beamline ID14-EH1 , using an ADSC Q4 CCD detector. The temperature of the crystals was maintained at 100K using a nitrogen cryostream. Data were processed using the HKL package [Otwinowski and Minor, 1997], statistics are shown in Table I.

The structure of PDK1 was solved by molecular replacement with AMoRe [Navaza, 1994] using the structure of PKA in complex with an inhibitory peptide as a search model (PDB entry 1YDB), against 8-4 Ådata. A single, well separated solution was found with an R-factor of 0.479 (correlation coefficient = 0.428). The structure was automatically built using warpNtrace [Perrakis et al., 1999], which found 262 of a possible 309 residues, giving an initial protein model with R=0.293 (Rfree=0.318) after simulated annealing in CNS [Brunger et al., 1998]. Iterative protein

building in O [Jones et al., 1991] together with refinement in CNS, which included incorporation of a model for ATP, the phosphoserine in the activation loop, solvent molecules and a key sulphate molecule, resulted in a final model with R=0.195 (Rfree=0.222). No electron density was observed for residues 51-70 (the N-terminus of the construct) and 233-236 (the tip of the activation loop). All figures were made with PyMOL (http://www.pymol.org).

Table I

Details of data collection & structure refinement for the PDK1 kinase domain. Values between brackets are for the highest resolution shell. All measured data were included in structure refinement.

Wave length ( )	0.933
Space group	$P3_221$
Unit cell ( )	a=123.01, b=123.01, c=47.62
Resolution ( )	25-2.0 (2.07-1.0)
Observed reflections	77315
Unique reflections	27643
Redundancy	2.8 (2.5)
Completeness(%)	98.0 (93.5)
Rmerge	0.091 (0.454)
I/ sigma I	7.3 (2.0)
R_{free} reflections	579
R_{cryst}	0.195
R_{free}	0.222
Number of groups	
°°Protein residues	71-359
°°Water	200
ATP	1

SO_4	5
Glycerol	8
Wilson B (^{2})	22.4
< B > Protein	25.6
< B > Water	35.7
< B > ATP	38.8
RMSD from ideal geometry	
Bond lengths ( )	0.005
Bond angles ($^\circ$)	1.34
Main chain B (^{2})	1.5.

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Example 2: Co-ordinates for PDK1fragment with all alternate side chains.

```
REMARK coordinates from restrained individual B-factor refinement
REMARK refinement resolution: 25.0 - 2.0 A
REMARK starting r= 0.1972 free_r= 0.2220
REMARK final    r= 0.1954 free_r= 0.2224
REMARK B rmsd for bonded mainchain atoms=  1.501  target= 1.5
REMARK B rmsd for bonded sidechain atoms=  2.235  target= 2.0
REMARK B rmsd for angle mainchain atoms=  2.347  target= 2.0
REMARK B rmsd for angle sidechain atoms=  3.302  target= 2.5
REMARK rweight=  0.0900 (with wa= 1.29263)
REMARK target= mlf  steps= 30
REMARK  sg= P3(2)21  a= 123.013  b= 123.013  c= 47.624  alpha= 90  beta= 90
gamma= 120
REMARK parameter file 1  : /dd1/david/projects/PDK1_new/CNS/prot.par
REMARK parameter file 2  : /dd1/david/projects/PDK1_new/CNS/atp.par
REMARK parameter file 3  : CNS_TOPPAR:water_rep.param
REMARK parameter file 4  : CNS_TOPPAR:ion.param
REMARK parameter file 5  : /dd1/david/projects/PDK1_new/CNS/glycerol.par
REMARK molecular structure file: ../generate/alternate.mtf
REMARK input coordinates: ../minimize/minimize.pdb
REMARK reflection file= ../../1/hkl/cns.hkl
REMARK ncs= none
REMARK B-correction resolution: 6.0 - 2.0
REMARK initial B-factor correction applied to fobs :
REMARK   B11=  -2.766 B22=  -2.766 B33=   5.532
REMARK   B12=  -0.375 B13=   0.000 B23=   0.000
REMARK B-factor correction applied to coordinate array B:    0.031
REMARK bulk solvent: density level= 0.378441 e/A^3, B-factor= 52.6885 A^2
REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
REMARK theoretical total number of refl. in resol. range:     28210 ( 100.0
% )
REMARK number of unobserved reflections (no entry or |F|=0):    568 (   2.0
% )
REMARK number of reflections rejected:                             0 (   0.0
% )
REMARK total number of reflections used:                       27642 (  98.0
% )
REMARK number of reflections in working set:                   27063 (  95.9
% )
REMARK number of reflections in test set:                        579 (   2.1
% )
CRYST1  123.013  123.013   47.624  90.00  90.00 120.00 P 32 2 1
REMARK FILENAME="bindividual.pdb"
REMARK DATE:16-Apr-2002  18:31:12       created by user: david
REMARK VERSION:1.0
ATOM      1  CB  PRO A  71   58.912  -7.251   8.216  1.00 67.78  A
ATOM      2  CG  PRO A  71   59.621  -6.941   9.534  1.00 69.16  A
ATOM      3  C   PRO A  71   59.493  -6.506   5.894  1.00 67.06  A
ATOM      4  O   PRO A  71   59.196  -5.318   5.766  1.00 66.66  A
ATOM      5  N   PRO A  71   60.984  -6.073   7.833  1.00 67.86  A
ATOM      6  CD  PRO A  71   60.554  -5.762   9.207  1.00 68.24  A
ATOM      7  CA  PRO A  71   60.040  -7.035   7.217  1.00 67.75  A
ATOM      8  N   PRO A  72   59.356  -7.385   4.890  1.00 66.32  A
ATOM      9  CD  PRO A  72   59.712  -8.816   4.898  1.00 67.17  A
ATOM     10  CA  PRO A  72   58.840  -6.986   3.578  1.00 65.61  A
ATOM     11  CB  PRO A  72   58.672  -8.321   2.858  1.00 66.47  A
ATOM     12  CG  PRO A  72   59.796  -9.133   3.419  1.00 67.57  A
```

```
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ATOM     14  O   PRO A  72    56.710  -6.451   4.561  1.00 64.11  A
ATOM     15  N   ALA A  73    57.341  -5.268   2.753  1.00 61.57  A
ATOM     16  CA  ALA A  73    56.133  -4.454   2.708  1.00 58.74  A
ATOM     17  CB  ALA A  73    56.438  -3.030   3.165  1.00 58.05  A
ATOM     18  C   ALA A  73    55.626  -4.448   1.271  1.00 56.78  A
ATOM     19  O   ALA A  73    56.347  -4.834   0.349  1.00 56.95  A
ATOM     20  N   PRO A  74    54.372  -4.024   1.057  1.00 54.15  A
ATOM     21  CD  PRO A  74    53.335  -3.610   2.018  1.00 53.31  A
ATOM     22  CA  PRO A  74    53.856  -4.003  -0.314  1.00 52.54  A
ATOM     23  CB  PRO A  74    52.474  -3.375  -0.148  1.00 52.86  A
ATOM     24  CG  PRO A  74    52.067  -3.824   1.226  1.00 52.88  A
ATOM     25  C   PRO A  74    54.772  -3.167  -1.204  1.00 50.08  A
ATOM     26  O   PRO A  74    55.559  -2.361  -0.708  1.00 49.96  A
ATOM     27  N   ALA A  75    54.680  -3.366  -2.514  1.00 47.58  A
ATOM     28  CA  ALA A  75    55.503  -2.602  -3.446  1.00 44.69  A
ATOM     29  CB  ALA A  75    55.312  -3.121  -4.870  1.00 46.14  A
ATOM     30  C   ALA A  75    55.100  -1.134  -3.371  1.00 41.55  A
ATOM     31  O   ALA A  75    53.947  -0.813  -3.086  1.00 41.01  A
ATOM     32  N   LYS A  76    56.053  -0.245  -3.619  1.00 38.31  A
ATOM     33  CA  LYS A  76    55.781   1.184  -3.588  1.00 35.72  A
ATOM     34  CB  LYS A  76    57.053   1.957  -3.930  1.00 37.70  A
ATOM     35  CG  LYS A  76    57.123   3.356  -3.350  1.00 40.99  A
ATOM     36  CD  LYS A  76    57.262   3.316  -1.836  1.00 40.04  A
ATOM     37  CE  LYS A  76    57.511   4.705  -1.277  1.00 42.08  A
ATOM     38  NZ  LYS A  76    57.681   4.695   0.202  1.00 42.99  A
ATOM     39  C   LYS A  76    54.708   1.467  -4.638  1.00 32.65  A
ATOM     40  O   LYS A  76    54.814   1.005  -5.770  1.00 31.41  A
ATOM     41  N   LYS A  77    53.668   2.207  -4.270  1.00 28.59  A
ATOM     42  CA  LYS A  77    52.619   2.517  -5.232  1.00 25.72  A
ATOM     43  CB  LYS A  77    51.316   2.865  -4.509  1.00 26.22  A
ATOM     44  CG  LYS A  77    50.796   1.731  -3.631  1.00 27.15  A
ATOM     45  CD  LYS A  77    49.487   2.089  -2.967  1.00 26.80  A
ATOM     46  CE  LYS A  77    49.136   1.091  -1.870  1.00 27.31  A
ATOM     47  NZ  LYS A  77    48.998  -0.296  -2.380  1.00 27.17  A
ATOM     48  C   LYS A  77    53.053   3.668  -6.137  1.00 24.67  A
ATOM     49  O   LYS A  77    54.010   4.377  -5.829  1.00 21.60  A
ATOM     50  N   ARG A  78    52.351   3.838  -7.254  1.00 23.66  A
ATOM     51  CA  ARG A  78    52.662   4.897  -8.211  1.00 26.14  A
ATOM     52  CB  ARG A  78    53.574   4.344  -9.318  1.00 28.57  A
ATOM     53  CG  ARG A  78    53.017   3.139 -10.050  1.00 34.78  A
ATOM     54  CD  ARG A  78    54.092   2.465 -10.896  1.00 40.96  A
ATOM     55  NE  ARG A  78    53.560   1.364 -11.700  1.00 48.93  A
ATOM     56  CZ  ARG A  78    52.985   0.270 -11.203  1.00 52.58  A
ATOM     57  NH1 ARG A  78    52.860   0.113  -9.889  1.00 54.60  A
ATOM     58  NH2 ARG A  78    52.530  -0.672 -12.022  1.00 54.09  A
ATOM     59  C   ARG A  78    51.382   5.488  -8.803  1.00 23.76  A
ATOM     60  O   ARG A  78    50.311   4.888  -8.706  1.00 24.25  A
ATOM     61  N   PRO A  79    51.475   6.676  -9.428  1.00 21.76  A
ATOM     62  CD  PRO A  79    52.691   7.475  -9.668  1.00 20.82  A
ATOM     63  CA  PRO A  79    50.301   7.325 -10.021  1.00 21.96  A
ATOM     64  CB  PRO A  79    50.910   8.481 -10.816  1.00 22.27  A
ATOM     65  CG  PRO A  79    52.124   8.831 -10.014  1.00 22.12  A
ATOM     66  C   PRO A  79    49.446   6.413 -10.903  1.00 22.86  A
ATOM     67  O   PRO A  79    48.213   6.461 -10.842  1.00 20.52  A
ATOM     68  N   GLU A  80    50.103   5.586 -11.714  1.00 21.87  A
ATOM     69  CA  GLU A  80    49.403   4.685 -12.628  1.00 22.99  A
ATOM     70  CB  GLU    80 50.393   3.994 -13.571  0.50 25.24  AC1
ATOM     71  CG  GLU    80 51.230   2.907 -12.925  0.50 28.75  AC1
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ATOM     72  CD  GLU     80 52.157   2.224 -13.913  0.50 31.99  AC1
ATOM     73  OE1 GLU     80 53.072   2.897 -14.433  0.50 34.34  AC1
ATOM     74  OE2 GLU     80 51.969   1.015 -14.172  0.50 32.83  AC1
ATOM     75  C   GLU A  80   48.556   3.631 -11.912  1.00 22.09  A
ATOM     76  O   GLU A  80   47.692   3.013 -12.530  1.00 22.37  A
ATOM     77  N   ASP A  81   48.804   3.413 -10.622  1.00 19.97  A
ATOM     78  CA  ASP A  81   48.026   2.423  -9.874  1.00 19.93  A
ATOM     79  CB  ASP A  81   48.736   2.029  -8.571  1.00 21.19  A
ATOM     80  CG  ASP A  81   50.089   1.380  -8.807  1.00 22.46  A
ATOM     81  OD1 ASP A  81   50.195   0.554  -9.731  1.00 24.22  A
ATOM     82  OD2 ASP A  81      51.043   1.685  -8.058  1.00 23.33      A
ATOM     83  C   ASP A  81      46.652   2.975  -9.518  1.00 20.85      A
ATOM     84  O   ASP A  81      45.793   2.246  -9.015  1.00 19.96      A
ATOM     85  N   PHE A  82      46.445   4.258  -9.804  1.00 18.91      A
ATOM     86  CA  PHE A  82      45.200   4.934  -9.465  1.00 19.30      A
ATOM     87  CB  PHE A  82      45.475   6.027  -8.427  1.00 18.43      A
ATOM     88  CG  PHE A  82      46.134   5.531  -7.175  1.00 18.01      A
ATOM     89  CD1 PHE A  82      45.371   5.136  -6.084  1.00 17.19      A
ATOM     90  CD2 PHE A  82      47.520   5.460  -7.086  1.00 18.99      A
ATOM     91  CE1 PHE A  82      45.977   4.676  -4.918  1.00 17.12      A
ATOM     92  CE2 PHE A  82      48.137   5.000  -5.925  1.00 19.64      A
ATOM     93  CZ  PHE A  82      47.361   4.607  -4.838  1.00 18.00      A
ATOM     94  C   PHE A  82      44.476   5.596 -10.621  1.00 20.81      A
ATOM     95  O   PHE A  82      45.066   5.933 -11.649  1.00 20.34      A
ATOM     96  N   LYS A  83      43.182   5.792 -10.411  1.00 19.80      A
ATOM     97  CA  LYS A  83      42.321   6.478 -11.353  1.00 21.65      A
ATOM     98  CB  LYS A  83      41.096   5.625 -11.687  1.00 22.02      A
ATOM     99  CG  LYS A  83      40.062   6.326 -12.550  1.00 28.93      A
ATOM    100  CD  LYS A  83      38.974   5.355 -12.981  1.00 34.20      A
ATOM    101  CE  LYS A  83      37.909   6.042 -13.824  1.00 38.10      A
ATOM    102  NZ  LYS A  83      37.179   7.086 -13.043  1.00 43.33      A
ATOM    103  C   LYS A  83      41.913   7.702 -10.541  1.00 20.74      A
ATOM    104  O   LYS A  83      41.084   7.606  -9.635  1.00 20.98      A
ATOM    105  N   PHE A  84      42.513   8.848 -10.835  1.00 19.99      A
ATOM    106  CA  PHE A  84      42.188  10.049 -10.083  1.00 18.63      A
ATOM    107  CB  PHE A  84      43.279  11.103 -10.258  1.00 18.95      A
ATOM    108  CG  PHE A  84      44.571  10.741  -9.587  1.00 17.68      A
ATOM    109  CD1 PHE A  84      45.498   9.926 -10.224  1.00 18.16      A
ATOM    110  CD2 PHE A  84      44.843  11.183  -8.299  1.00 19.66      A
ATOM    111  CE1 PHE A  84      46.676   9.556  -9.589  1.00 18.09      A
ATOM    112  CE2 PHE A  84      46.021  10.816  -7.653  1.00 18.89      A
ATOM    113  CZ  PHE A  84      46.936  10.002  -8.301  1.00 17.33      A
ATOM    114  C   PHE A  84      40.834  10.617 -10.460  1.00 19.69      A
ATOM    115  O   PHE A  84      40.391  10.489 -11.601  1.00 20.72      A
ATOM    116  N   GLY A  85      40.178  11.233  -9.484  1.00 16.80      A
ATOM    117  CA  GLY A  85      38.872  11.810  -9.716  1.00 17.73      A
ATOM    118  C   GLY A  85      38.819  13.280  -9.346  1.00 18.75      A
ATOM    119  O   GLY A  85      39.740  14.043  -9.650  1.00 18.45      A
ATOM    120  N   LYS A  86      37.753  13.673  -8.659  1.00 16.00      A
ATOM    121  CA  LYS A  86      37.571  15.064  -8.278  1.00 18.26      A
ATOM    122  CB  LYS A  86      36.133  15.302  -7.812  1.00 19.00      A
ATOM    123  CG  LYS A  86      35.793  14.660  -6.481  1.00 21.55      A
ATOM    124  CD  LYS A  86      34.368  14.981  -6.066  1.00 26.48      A
ATOM    125  CE  LYS A  86      33.994  14.239  -4.793  1.00 31.92      A
ATOM    126  NZ  LYS A  86      32.568  14.457  -4.412  1.00 35.36      A
ATOM    127  C   LYS A  86      38.523  15.571  -7.202  1.00 18.57      A
ATOM    128  O   LYS A  86      39.045  14.807  -6.385  1.00 16.77      A
ATOM    129  N   ILE A  87      38.737  16.881  -7.227  1.00 17.88      A
ATOM    130  CA  ILE A  87      39.577  17.554  -6.256  1.00 18.26      A
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	ATOM	131	CB	ILE	A	87	39.994	18.952	-6.772	1.00 19.60	A
	ATOM	132	CG2	ILE	A	87	40.593	19.786	-5.628	1.00 18.73	A
	ATOM	133	CG1	ILE	A	87	40.968	18.786	-7.945	1.00 21.16	A
	ATOM	134	CD1	ILE	A	87	41.412	20.087	-8.588	1.00 25.26	A
5	ATOM	135	C	ILE	A	87	38.731	17.709	-4.997	1.00 19.67	A
	ATOM	136	O	ILE	A	87	37.628	18.249	-5.052	1.00 20.41	A
	ATOM	137	N	LEU	A	88	39.240	17.229	-3.867	1.00 19.15	A
	ATOM	138	CA	LEU	A	88	38.508	17.324	-2.611	1.00 20.68	A
	ATOM	139	CB	LEU	A	88	38.870	16.151	-1.700	1.00 19.97	A
10	ATOM	140	CG	LEU	A	88	38.529	14.759	-2.237	1.00 19.24	A
	ATOM	141	CD1	LEU	A	88	39.090	13.692	-1.311	1.00 21.41	A
	ATOM	142	CD2	LEU	A	88	37.029	14.622	-2.359	1.00 18.84	A
	ATOM	143	C	LEU	A	88	38.815	18.632	-1.901	1.00 23.11	A
	ATOM	144	O	LEU	A	88	37.999	19.146	-1.139	1.00 25.10	A
15	ATOM	145	N	GLY	A	89	39.997	19.174	-2.149	1.00 24.09	A
	ATOM	146	CA	GLY	A	89	40.367	20.418	-1.507	1.00 24.27	A
	ATOM	147	C	GLY	A	89	41.658	20.954	-2.078	1.00 25.47	A
	ATOM	148	O	GLY	A	89	42.445	20.202	-2.666	1.00 22.19	A
	ATOM	149	N	GLU	A	90	41.870	22.254	-1.906	1.00 26.22	A
20	ATOM	150	CA	GLU	A	90	43.064	22.924	-2.404	1.00 29.96	A
	ATOM	151	CB	GLU	A	90	42.698	23.814	-3.596	1.00 30.75	A
	ATOM	152	CG	GLU	A	90	42.267	23.038	-4.831	1.00 34.32	A
	ATOM	153	CD	GLU	A	90	41.711	23.930	-5.927	1.00 38.27	A
	ATOM	154	OE1	GLU	A	90	40.590	24.456	-5.764	1.00 40.57	A
25	ATOM	155	OE2	GLU	A	90	42.398	24.110	-6.952	1.00 40.90	A
	ATOM	156	C	GLU	A	90	43.711	23.768	-1.313	1.00 30.68	A
	ATOM	157	O	GLU	A	90	43.049	24.574	-0.668	1.00 32.83	A
	ATOM	158	N	GLY	A	91	45.006	23.566	-1.104	1.00 29.66	A
	ATOM	159	CA	GLY	A	91	45.724	24.332	-0.104	1.00 29.40	A
30	ATOM	160	C	GLY	A	91	46.795	25.151	-0.798	1.00 29.98	A
	ATOM	161	O	GLY	A	91	46.894	25.130	-2.028	1.00 28.16	A
	ATOM	162	N	SER	A	92	47.605	25.870	-0.029	1.00 28.30	A
	ATOM	163	CA	SER	A	92	48.653	26.681	-0.633	1.00 30.50	A
	ATOM	164	CB	SER	A	92	49.165	27.717	0.370	1.00 32.43	A
35	ATOM	165	OG	SER	A	92	49.520	27.099	1.593	1.00 40.94	A
	ATOM	166	C	SER	A	92	49.815	25.843	-1.164	1.00 29.77	A
	ATOM	167	O	SER	A	92	50.456	26.221	-2.143	1.00 30.46	A
	ATOM	168	N	PHE	A	93	50.087	24.703	-0.536	1.00 27.65	A
	ATOM	169	CA	PHE	A	93	51.185	23.855	-0.995	1.00 26.34	A
40	ATOM	170	CB	PHE	A	93	52.281	23.785	0.068	1.00 27.95	A
	ATOM	171	CG	PHE	A	93	52.861	25.117	0.406	1.00 31.06	A
	ATOM	172	CD1	PHE	A	93	52.283	25.909	1.392	1.00 29.96	A
	ATOM	173	CD2	PHE	A	93	53.949	25.613	-0.308	1.00 31.38	A
	ATOM	174	CE1	PHE	A	93	52.779	27.181	1.665	1.00 32.69	A
45	ATOM	175	CE2	PHE	A	93	54.452	26.883	-0.044	1.00 32.63	A
	ATOM	176	CZ	PHE	A	93	53.864	27.670	0.945	1.00 31.81	A
	ATOM	177	C	PHE	A	93	50.759	22.445	-1.365	1.00 25.39	A
	ATOM	178	O	PHE	A	93	51.601	21.559	-1.522	1.00 24.59	A
	ATOM	179	N	SER	A	94	49.457	22.235	-1.519	1.00 23.63	A
50	ATOM	180	CA	SER	A	94	48.965	20.912	-1.860	1.00 21.43	A
	ATOM	181	CB	SER	A	94	49.017	20.013	-0.628	1.00 21.42	A
	ATOM	182	OG	SER	A	94	48.091	20.475	0.340	1.00 21.19	A
	ATOM	183	C	SER	A	94	47.539	20.925	-2.378	1.00 19.82	A
	ATOM	184	O	SER	A	94	46.795	21.882	-2.173	1.00 18.76	A
55	ATOM	185	N	THR	A	95	47.174	19.832	-3.038	1.00 19.38	A
	ATOM	186	CA	THR	A	95	45.840	19.637	-3.580	1.00 17.98	A
	ATOM	187	CB	THR	A	95	45.818	19.818	-5.110	1.00 19.25	A
	ATOM	188	OG1	THR	A	95	46.196	21.162	-5.434	1.00 22.04	A
	ATOM	189	CG2	THR	A	95	44.421	19.549	-5.661	1.00 17.61	A

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ATOM    190  C   THR A  95      45.455  18.201  -3.243  1.00 18.61      A
ATOM    191  O   THR A  95      46.212  17.264  -3.524  1.00 17.10      A
ATOM    192  N   VAL A  96      44.295  18.024  -2.623  1.00 16.53      A
ATOM    193  CA  VAL A  96      43.845  16.685  -2.266  1.00 16.05      A
ATOM    194  CB  VAL A  96      43.170  16.672  -0.886  1.00 16.32      A
ATOM    195  CG1 VAL A  96      42.741  15.249  -0.532  1.00 18.02      A
ATOM    196  CG2 VAL A  96      44.145  17.206   0.168  1.00 16.69      A
ATOM    197  C   VAL A  96      42.875  16.207  -3.335  1.00 16.42      A
ATOM    198  O   VAL A  96      41.906  16.892  -3.665  1.00 16.47      A
ATOM    199  N   VAL A  97      43.157  15.033  -3.888  1.00 16.80      A
ATOM    200  CA  VAL A  97      42.338  14.471  -4.949  1.00 16.72      A
ATOM    201  CB  VAL A  97      43.153  14.354  -6.255  1.00 18.43      A
ATOM    202  CG1 VAL A  97      42.249  13.927  -7.404  1.00 19.69      A
ATOM    203  CG2 VAL A  97      43.831  15.685  -6.569  1.00 17.84      A
ATOM    204  C   VAL A  97      41.812  13.091  -4.583  1.00 16.77      A
ATOM    205  O   VAL A  97      42.532  12.270  -4.014  1.00 17.13      A
ATOM    206  N   LEU A  98      40.545  12.845  -4.895  1.00 16.62      A
ATOM    207  CA  LEU A  98      39.947  11.548  -4.624  1.00 17.04      A
ATOM    208  CB  LEU A  98      38.424  11.633  -4.743  1.00 16.89      A
ATOM    209  CG  LEU A  98      37.635  10.342  -4.508  1.00 19.46      A
ATOM    210  CD1 LEU A  98      37.990   9.762  -3.146  1.00 20.07      A
ATOM    211  CD2 LEU A  98      36.143  10.627  -4.588  1.00 17.93      A
ATOM    212  C   LEU A  98      40.512  10.597  -5.677  1.00 17.38      A
ATOM    213  O   LEU A  98      40.527  10.920  -6.863  1.00 18.60      A
ATOM    214  N   ALA A  99      40.995   9.438  -5.246  1.00 17.13      A
ATOM    215  CA  ALA A  99      41.570   8.466  -6.168  1.00 18.42      A
ATOM    216  CB  ALA A  99      43.090   8.524  -6.105  1.00 14.76      A
ATOM    217  C   ALA A  99      41.102   7.055  -5.848  1.00 21.40      A
ATOM    218  O   ALA A  99      40.941   6.691  -4.679  1.00 22.52      A
ATOM    219  N   ARG A 100      40.878   6.261  -6.888  1.00 19.77      A
ATOM    220  CA  ARG A 100      40.459   4.884  -6.693  1.00 20.85      A
ATOM    221  CB  ARG A 100      39.202   4.585  -7.518  1.00 24.22      A
ATOM    222  CG  ARG A 100      38.608   3.205  -7.256  1.00 31.78      A
ATOM    223  CD  ARG A 100      37.326   2.979  -8.048  1.00 36.24      A
ATOM    224  NE  ARG A 100      36.213   3.818  -7.594  1.00 41.40      A
ATOM    225  CZ  ARG A 100      35.566   3.662  -6.439  1.00 42.05      A
ATOM    226  NH1 ARG A 100      35.912   2.696  -5.598  1.00 40.67      A
ATOM    227  NH2 ARG A 100      34.559   4.468  -6.128  1.00 43.65      A
ATOM    228  C   ARG A 100      41.613   3.985  -7.129  1.00 18.63      A
ATOM    229  O   ARG A 100      42.078   4.065  -8.271  1.00 19.49      A
ATOM    230  N   GLU A 101      42.102   3.157  -6.212  1.00 16.43      A
ATOM    231  CA  GLU A 101      43.196   2.246  -6.533  1.00 16.11      A
ATOM    232  CB  GLU A 101      43.774   1.637  -5.248  1.00 16.79      A
ATOM    233  CG  GLU A 101      44.917   0.657  -5.488  1.00 16.51      A
ATOM    234  CD  GLU A 101      45.501   0.115  -4.200  1.00 18.20      A
ATOM    235  OE1 GLU A 101      44.733  -0.081  -3.239  1.00 18.32      A
ATOM    236  OE2 GLU A 101      46.725  -0.132  -4.150  1.00 17.14      A
ATOM    237  C   GLU A 101      42.625   1.152  -7.442  1.00 17.92      A
ATOM    238  O   GLU A 101      41.681   0.462  -7.069  1.00 18.02      A
ATOM    239  N   LEU A 102      43.198   1.002  -8.632  1.00 19.06      A
ATOM    240  CA  LEU A 102      42.718   0.025  -9.607  1.00 20.71      A
ATOM    241  CB  LEU A 102      43.569   0.097 -10.878  1.00 23.42      A
ATOM    242  CG  LEU A 102      43.531   1.426 -11.642  1.00 25.30      A
ATOM    243  CD1 LEU A 102      44.577   1.414 -12.748  1.00 27.88      A
ATOM    244  CD2 LEU A 102      42.140   1.647 -12.214  1.00 26.79      A
ATOM    245  C   LEU A 102      42.671  -1.418  -9.125  1.00 21.62      A
ATOM    246  O   LEU A 102      41.668  -2.103  -9.305  1.00 21.09      A
ATOM    247  N   ALA A 103      43.753  -1.874  -8.507  1.00 19.38      A
ATOM    248  CA  ALA A 103      43.836  -3.249  -8.035  1.00 20.87      A
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	ATOM	249	CB	ALA	A	103	45.284	-3.571	-7.671	1.00 19.23	A
	ATOM	250	C	ALA	A	103	42.919	-3.629	-6.872	1.00 19.92	A
	ATOM	251	O	ALA	A	103	42.703	-4.815	-6.628	1.00 20.38	A
	ATOM	252	N	THR	A	104	42.361	-2.643	-6.175	1.00 18.12	A
5	ATOM	253	CA	THR	A	104	41.517	-2.927	-5.018	1.00 17.15	A
	ATOM	254	CB	THR	A	104	42.212	-2.484	-3.717	1.00 19.54	A
	ATOM	255	OG1	THR	A	104	42.456	-1.070	-3.773	1.00 19.26	A
	ATOM	256	CG2	THR	A	104	43.536	-3.219	-3.529	1.00 17.02	A
	ATOM	257	C	THR	A	104	40.159	-2.247	-5.026	1.00 19.44	A
10	ATOM	258	O	THR	A	104	39.259	-2.648	-4.285	1.00 18.70	A
	ATOM	259	N	SER	A	105	40.034	-1.207	-5.847	1.00 19.65	A
	ATOM	260	CA	SER	A	105	38.819	-0.400	-5.967	1.00 19.37	A
	ATOM	261	CB	SER		105	37.598	-1.304	-6.173	0.50 21.81	AC1
	ATOM	262	OG	SER		105	36.431	-0.539	-6.412	0.50 23.01	AC1
15	ATOM	263	C	SER	A	105	38.644	0.447	-4.701	1.00 18.99	A
	ATOM	264	O	SER	A	105	37.602	1.070	-4.488	1.00 18.66	A
	ATOM	265	N	ARG	A	106	39.674	0.468	-3.861	1.00 16.84	A
	ATOM	266	CA	ARG	A	106	39.655	1.267	-2.634	1.00 16.21	A
	ATOM	267	CB	ARG	A	106	40.827	0.886	-1.723	1.00 16.41	A
20	ATOM	268	CG	ARG	A	106	40.619	-0.367	-0.906	1.00 15.49	A
	ATOM	269	CD	ARG	A	106	41.887	-0.755	-0.170	1.00 17.43	A
	ATOM	270	NE	ARG	A	106	41.620	-1.792	0.824	1.00 20.47	A
	ATOM	271	CZ	ARG	A	106	42.548	-2.568	1.371	1.00 20.24	A
	ATOM	272	NH1	ARG	A	106	43.821	-2.433	1.017	1.00 17.80	A
25	ATOM	273	NH2	ARG	A	106	42.198	-3.468	2.285	1.00 20.14	A
	ATOM	274	C	ARG	A	106	39.785	2.746	-2.981	1.00 17.37	A
	ATOM	275	O	ARG	A	106	40.514	3.103	-3.902	1.00 17.75	A
	ATOM	276	N	GLU	A	107	39.085	3.599	-2.240	1.00 16.06	A
	ATOM	277	CA	GLU	A	107	39.156	5.039	-2.461	1.00 20.80	A
30	ATOM	278	CB	GLU	A	107	37.779	5.694	-2.337	1.00 22.93	A
	ATOM	279	CG	GLU	A	107	36.711	5.171	-3.269	1.00 30.87	A
	ATOM	280	CD	GLU	A	107	35.431	5.975	-3.148	1.00 32.40	A
	ATOM	281	OE1	GLU	A	107	35.262	6.939	-3.923	1.00 33.74	A
	ATOM	282	OE2	GLU	A	107	34.608	5.654	-2.263	1.00 36.00	A
35	ATOM	283	C	GLU	A	107	40.053	5.678	-1.410	1.00 18.93	A
	ATOM	284	O	GLU	A	107	39.891	5.427	-0.220	1.00 19.21	A
	ATOM	285	N	TYR	A	108	40.988	6.507	-1.852	1.00 16.70	A
	ATOM	286	CA	TYR	A	108	41.883	7.209	-0.942	1.00 15.86	A
	ATOM	287	CB	TYR	A	108	43.325	6.728	-1.104	1.00 15.30	A
40	ATOM	288	CG	TYR	A	108	43.593	5.328	-0.612	1.00 16.33	A
	ATOM	289	CD1	TYR	A	108	43.765	5.066	0.746	1.00 16.36	A
	ATOM	290	CE1	TYR	A	108	44.046	3.769	1.201	1.00 18.48	A
	ATOM	291	CD2	TYR	A	108	43.701	4.268	-1.511	1.00 13.25	A
	ATOM	292	CE2	TYR	A	108	43.980	2.981	-1.075	1.00 17.28	A
45	ATOM	293	CZ	TYR	A	108	44.152	2.736	0.276	1.00 19.17	A
	ATOM	294	OH	TYR	A	108	44.440	1.461	0.688	1.00 19.38	A
	ATOM	295	C	TYR	A	108	41.850	8.687	-1.292	1.00 16.80	A
	ATOM	296	O	TYR	A	108	41.560	9.058	-2.431	1.00 15.22	A
	ATOM	297	N	ALA	A	109	42.132	9.528	-0.306	1.00 14.61	A
50	ATOM	298	CA	ALA	A	109	42.207	10.957	-0.539	1.00 14.30	A
	ATOM	299	CB	ALA	A	109	41.671	11.726	0.661	1.00 14.78	A
	ATOM	300	C	ALA	A	109	43.713	11.136	-0.667	1.00 16.79	A
	ATOM	301	O	ALA	A	109	44.450	10.983	0.317	1.00 16.52	A
	ATOM	302	N	ILE	A	110	44.182	11.410	-1.881	1.00 14.80	A
55	ATOM	303	CA	ILE	A	110	45.609	11.574	-2.093	1.00 15.80	A
	ATOM	304	CB	ILE	A	110	46.065	10.863	-3.396	1.00 16.85	A
	ATOM	305	CG2	ILE	A	110	47.550	11.098	-3.632	1.00 16.80	A
	ATOM	306	CG1	ILE	A	110	45.774	9.358	-3.284	1.00 17.76	A
	ATOM	307	CD1	ILE	A	110	46.308	8.513	-4.437	1.00 16.07	A

ATOM	308	C	ILE	A	110	46.004	13.045	-2.129	1.00	17.78	A
ATOM	309	O	ILE	A	110	45.534	13.813	-2.976	1.00	16.24	A
ATOM	310	N	LYS	A	111	46.846	13.435	-1.177	1.00	16.15	A
ATOM	311	CA	LYS	A	111	47.326	14.808	-1.100	1.00	17.20	A
ATOM	312	CB	LYS	A	111	47.700	15.176	0.344	1.00	17.41	A
ATOM	313	CG	LYS	A	111	48.350	16.547	0.464	1.00	20.71	A
ATOM	314	CD	LYS	A	111	48.585	16.971	1.910	1.00	24.25	A
ATOM	315	CE	LYS	A	111	47.288	17.381	2.598	1.00	29.46	A
ATOM	316	NZ	LYS	A	111	47.516	17.866	4.000	1.00	30.50	A
ATOM	317	C	LYS	A	111	48.551	14.890	-1.994	1.00	16.41	A
ATOM	318	O	LYS	A	111	49.509	14.137	-1.813	1.00	18.20	A
ATOM	319	N	ILE	A	112	48.509	15.798	-2.963	1.00	15.87	A
ATOM	320	CA	ILE	A	112	49.606	15.967	-3.907	1.00	17.28	A
ATOM	321	CB	ILE	A	112	49.079	15.911	-5.358	1.00	16.43	A
ATOM	322	CG2	ILE	A	112	50.235	15.998	-6.341	1.00	15.12	A
ATOM	323	CG1	ILE	A	112	48.293	14.609	-5.565	1.00	16.82	A
ATOM	324	CD1	ILE	A	112	47.580	14.511	-6.904	1.00	18.47	A
ATOM	325	C	ILE	A	112	50.307	17.301	-3.663	1.00	19.03	A
ATOM	326	O	ILE	A	112	49.669	18.350	-3.635	1.00	19.15	A
ATOM	327	N	LEU	A	113	51.622	17.245	-3.472	1.00	20.22	A
ATOM	328	CA	LEU	A	113	52.416	18.442	-3.214	1.00	22.36	A
ATOM	329	CB	LEU	A	113	52.995	18.397	-1.794	1.00	22.13	A
ATOM	330	CG	LEU	A	113	52.042	18.063	-0.646	1.00	22.46	A
ATOM	331	CD1	LEU	A	113	51.866	16.557	-0.553	1.00	23.81	A
ATOM	332	CD2	LEU	A	113	52.603	18.595	0.660	1.00	23.68	A
ATOM	333	C	LEU	A	113	53.560	18.547	-4.215	1.00	23.37	A
ATOM	334	O	LEU	A	113	54.300	17.586	-4.424	1.00	23.11	A
ATOM	335	N	GLU	A	114	53.706	19.714	-4.834	1.00	23.88	A
ATOM	336	CA	GLU	A	114	54.771	19.920	-5.806	1.00	26.00	A
ATOM	337	CB	GLU	A	114	54.435	21.111	-6.706	1.00	27.74	A
ATOM	338	CG	GLU	A	114	55.533	21.452	-7.696	1.00	35.07	A
ATOM	339	CD	GLU	A	114	55.220	22.696	-8.497	1.00	39.24	A
ATOM	340	OE1	GLU	A	114	54.808	23.703	-7.885	1.00	41.45	A
ATOM	341	OE2	GLU	A	114	55.395	22.670	-9.736	1.00	44.05	A
ATOM	342	C	GLU	A	114	56.087	20.163	-5.067	1.00	24.37	A
ATOM	343	O	GLU	A	114	56.186	21.071	-4.238	1.00	24.43	A
ATOM	344	N	LYS	A	115	57.096	19.350	-5.360	1.00	24.10	A
ATOM	345	CA	LYS	A	115	58.376	19.493	-4.678	1.00	24.93	A
ATOM	346	CB	LYS	A	115	59.339	18.373	-5.103	1.00	23.72	A
ATOM	347	CG	LYS	A	115	59.139	17.080	-4.308	1.00	23.09	A
ATOM	348	CD	LYS	A	115	60.064	15.944	-4.743	1.00	21.92	A
ATOM	349	CE	LYS	A	115	59.691	15.400	-6.117	1.00	22.42	A
ATOM	350	NZ	LYS	A	115	60.447	14.150	-6.448	1.00	19.71	A
ATOM	351	C	LYS	A	115	59.031	20.858	-4.868	1.00	26.87	A
ATOM	352	O	LYS	A	115	59.492	21.469	-3.903	1.00	26.17	A
ATOM	353	N	ARG	A	116	59.058	21.348	-6.102	1.00	28.73	A
ATOM	354	CA	ARG	A	116	59.678	22.638	-6.380	1.00	29.66	A
ATOM	355	CB	ARG		116	59.533	22.980	-7.868	0.50	31.29	AC1
ATOM	356	CG	ARG		116	60.047	24.361	-8.267	0.50	33.19	AC1
ATOM	357	CD	ARG		116	61.368	24.710	-7.590	0.50	35.13	AC1
ATOM	358	NE	ARG		116	62.329	23.612	-7.618	0.50	36.42	AC1
ATOM	359	CZ	ARG		116	63.510	23.648	-7.009	0.50	36.18	AC1
ATOM	360	NH1	ARG		116	63.871	24.729	-6.332	0.50	36.12	AC1
ATOM	361	NH2	ARG		116	64.324	22.602	-7.067	0.50	35.77	AC1
ATOM	362	C	ARG	A	116	59.097	23.761	-5.519	1.00	29.70	A
ATOM	363	O	ARG	A	116	59.843	24.515	-4.889	1.00	29.16	A
ATOM	364	N	HIS	A	117	57.773	23.862	-5.472	1.00	27.22	A
ATOM	365	CA	HIS	A	117	57.126	24.903	-4.681	1.00	26.33	A
ATOM	366	CB	HIS	A	117	55.606	24.835	-4.848	1.00	28.41	A

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ATOM    367  CG  HIS A 117      54.881  26.005  -4.258  1.00 31.82      A
ATOM    368  CD2 HIS A 117      55.309  27.249  -3.935  1.00 33.19      A
ATOM    369  ND1 HIS A 117      53.536  25.974  -3.961  1.00 34.30      A
ATOM    370  CE1 HIS A 117      53.165  27.148  -3.480  1.00 34.58      A
ATOM    371  NE2 HIS A 117      54.222  27.940  -3.455  1.00 35.18      A
ATOM    372  C   HIS A 117      57.477  24.780  -3.202  1.00 26.22      A
ATOM    373  O   HIS A 117      57.737  25.776  -2.534  1.00 25.67      A
ATOM    374  N   ILE A 118      57.469  23.554  -2.689  1.00 24.94      A
ATOM    375  CA  ILE A 118      57.792  23.315  -1.285  1.00 23.94      A
ATOM    376  CB  ILE A 118      57.711  21.812  -0.952  1.00 23.50      A
ATOM    377  CG2 ILE A 118      58.374  21.533   0.389  1.00 23.76      A
ATOM    378  CG1 ILE A 118      56.246  21.362  -0.959  1.00 24.42      A
ATOM    379  CD1 ILE A 118      56.066  19.858  -0.834  1.00 28.06      A
ATOM    380  C   ILE A 118      59.195  23.821  -0.958  1.00 23.78      A
ATOM    381  O   ILE A 118      59.402  24.495   0.048  1.00 23.49      A
ATOM    382  N   ILE A 119      60.153  23.489  -1.815  1.00 23.46      A
ATOM    383  CA  ILE A 119      61.534  23.913  -1.619  1.00 25.13      A
ATOM    384  CB  ILE A 119      62.467  23.250  -2.664  1.00 24.25      A
ATOM    385  CG2 ILE A 119      63.858  23.890  -2.617  1.00 22.47      A
ATOM    386  CG1 ILE A 119      62.540  21.738  -2.395  1.00 25.05      A
ATOM    387  CD1 ILE A 119      63.327  20.945  -3.439  1.00 24.62      A
ATOM    388  C   ILE A 119      61.667  25.435  -1.705  1.00 25.96      A
ATOM    389  O   ILE A 119      62.330  26.051  -0.872  1.00 24.78      A
ATOM    390  N   LYS A 120      61.028  26.039  -2.704  1.00 27.67      A
ATOM    391  CA  LYS A 120      61.100  27.489  -2.879  1.00 30.29      A
ATOM    392  CB  LYS A 120      60.242  27.940  -4.060  1.00 32.34      A
ATOM    393  CG  LYS A 120      60.674  27.407  -5.409  1.00 39.30      A
ATOM    394  CD  LYS A 120      59.765  27.950  -6.512  1.00 45.19      A
ATOM    395  CE  LYS A 120      58.294  27.636  -6.218  1.00 46.48      A
ATOM    396  NZ  LYS A 120      57.363  28.155  -7.252  1.00 46.49      A
ATOM    397  C   LYS A 120      60.647  28.247  -1.638  1.00 30.89      A
ATOM    398  O   LYS A 120      61.303  29.198  -1.217  1.00 32.48      A
ATOM    399  N   GLU A 121      59.527  27.825  -1.055  1.00 29.82      A
ATOM    400  CA  GLU A 121      58.986  28.488   0.128  1.00 30.33      A
ATOM    401  CB  GLU A 121      57.455  28.416   0.117  1.00 33.04      A
ATOM    402  CG  GLU A 121      56.794  29.021  -1.120  1.00 36.45      A
ATOM    403  CD  GLU A 121      57.221  30.456  -1.373  1.00 39.88      A
ATOM    404  OE1 GLU A 121      57.200  31.264  -0.420  1.00 40.53      A
ATOM    405  OE2 GLU A 121      57.573  30.778  -2.529  1.00 43.24      A
ATOM    406  C   GLU A 121      59.511  27.930   1.451  1.00 30.37      A
ATOM    407  O   GLU A 121      58.946  28.204   2.513  1.00 31.24      A
ATOM    408  N   ASN A 122      60.588  27.151   1.390  1.00 29.03      A
ATOM    409  CA  ASN A 122      61.183  26.573   2.594  1.00 28.46      A
ATOM    410  CB  ASN A 122      61.836  27.673   3.436  1.00 31.28      A
ATOM    411  CG  ASN A 122      62.945  28.395   2.698  1.00 34.12      A
ATOM    412  OD1 ASN A 122      62.697  29.143   1.754  1.00 35.57      A
ATOM    413  ND2 ASN A 122      64.181  28.169   3.127  1.00 35.73      A
ATOM    414  C   ASN A 122      60.157  25.835   3.456  1.00 26.89      A
ATOM    415  O   ASN A 122      60.085  26.055   4.663  1.00 27.23      A
ATOM    416  N   LYS A 123      59.375  24.955   2.842  1.00 23.99      A
ATOM    417  CA  LYS A 123      58.358  24.210   3.574  1.00 22.43      A
ATOM    418  CB  LYS A 123      57.031  24.248   2.810  1.00 21.97      A
ATOM    419  CG  LYS A 123      56.475  25.645   2.599  1.00 25.68      A
ATOM    420  CD  LYS A 123      56.253  26.354   3.927  1.00 27.54      A
ATOM    421  CE  LYS A 123      55.822  27.796   3.716  1.00 31.30      A
ATOM    422  NZ  LYS A 123      55.756  28.540   5.004  1.00 33.21      A
ATOM    423  C   LYS A 123      58.748  22.759   3.821  1.00 22.20      A
ATOM    424  O   LYS A 123      57.924  21.960   4.264  1.00 22.50      A
ATOM    425  N   VAL A 124      59.997  22.412   3.535  1.00 20.59      A
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	ATOM	426	CA	VAL	A	124	60.439	21.039	3.730	1.00	20.25	A
	ATOM	427	CB	VAL	A	124	61.922	20.850	3.328	1.00	19.43	A
	ATOM	428	CG1	VAL	A	124	62.346	19.407	3.573	1.00	18.69	A
	ATOM	429	CG2	VAL	A	124	62.104	21.195	1.853	1.00	18.21	A
	ATOM	430	C	VAL	A	124	60.236	20.561	5.163	1.00	19.53	A
	ATOM	431	O	VAL	A	124	59.841	19.418	5.385	1.00	20.02	A
	ATOM	432	N	PRO	A	125	60.513	21.422	6.159	1.00	20.01	A
	ATOM	433	CD	PRO	A	125	61.178	22.738	6.118	1.00	18.69	A
	ATOM	434	CA	PRO	A	125	60.318	20.979	7.544	1.00	19.88	A
	ATOM	435	CB	PRO	A	125	60.793	22.180	8.363	1.00	19.95	A
	ATOM	436	CG	PRO	A	125	61.839	22.805	7.479	1.00	18.85	A
	ATOM	437	C	PRO	A	125	58.848	20.642	7.824	1.00	19.76	A
	ATOM	438	O	PRO	A	125	58.544	19.700	8.550	1.00	16.99	A
	ATOM	439	N	TYR	A	126	57.947	21.418	7.235	1.00	18.98	A
	ATOM	440	CA	TYR	A	126	56.516	21.220	7.435	1.00	21.97	A
	ATOM	441	CB	TYR	A	126	55.752	22.448	6.933	1.00	25.17	A
	ATOM	442	CG	TYR	A	126	56.040	23.690	7.748	1.00	30.98	A
	ATOM	443	CD1	TYR	A	126	55.438	23.886	8.991	1.00	33.95	A
	ATOM	444	CE1	TYR	A	126	55.721	25.015	9.763	1.00	36.60	A
	ATOM	445	CD2	TYR	A	126	56.938	24.657	7.292	1.00	35.43	A
	ATOM	446	CE2	TYR	A	126	57.231	25.792	8.058	1.00	37.20	A
	ATOM	447	CZ	TYR	A	126	56.618	25.962	9.291	1.00	37.40	A
	ATOM	448	OH	TYR	A	126	56.903	27.073	10.052	1.00	40.85	A
	ATOM	449	C	TYR	A	126	55.990	19.956	6.762	1.00	21.35	A
	ATOM	450	O	TYR	A	126	55.265	19.175	7.383	1.00	20.49	A
	ATOM	451	N	VAL	A	127	56.354	19.746	5.501	1.00	18.16	A
	ATOM	452	CA	VAL	A	127	55.892	18.562	4.790	1.00	17.58	A
	ATOM	453	CB	VAL	A	127	56.308	18.596	3.308	1.00	17.45	A
	ATOM	454	CG1	VAL	A	127	55.786	17.350	2.600	1.00	17.97	A
	ATOM	455	CG2	VAL	A	127	55.751	19.850	2.641	1.00	14.90	A
	ATOM	456	C	VAL	A	127	56.459	17.306	5.448	1.00	18.39	A
	ATOM	457	O	VAL	A	127	55.769	16.298	5.583	1.00	18.14	A
	ATOM	458	N	THR	A	128	57.716	17.381	5.869	1.00	17.50	A
	ATOM	459	CA	THR	A	128	58.375	16.260	6.530	1.00	18.54	A
	ATOM	460	CB	THR	A	128	59.861	16.586	6.805	1.00	18.01	A
	ATOM	461	OG1	THR	A	128	60.537	16.804	5.559	1.00	21.14	A
	ATOM	462	CG2	THR	A	128	60.536	15.446	7.545	1.00	17.95	A
	ATOM	463	C	THR	A	128	57.676	15.941	7.856	1.00	19.49	A
	ATOM	464	O	THR	A	128	57.438	14.776	8.179	1.00	18.76	A
	ATOM	465	N	ARG	A	129	57.345	16.981	8.619	1.00	19.60	A
	ATOM	466	CA	ARG	A	129	56.673	16.804	9.904	1.00	20.12	A
	ATOM	467	CB	ARG	A	129	56.534	18.144	10.621	1.00	21.33	A
	ATOM	468	CG	ARG	A	129	55.948	18.029	12.023	1.00	28.02	A
	ATOM	469	CD	ARG	A	129	55.721	19.404	12.597	1.00	31.25	A
	ATOM	470	NE	ARG	A	129	56.940	20.205	12.560	1.00	37.78	A
	ATOM	471	CZ	ARG	A	129	56.962	21.524	12.391	1.00	40.10	A
	ATOM	472	NH1	ARG	A	129	55.828	22.197	12.239	1.00	40.03	A
	ATOM	473	NH2	ARG	A	129	58.119	22.170	12.374	1.00	44.58	A
	ATOM	474	C	ARG	A	129	55.288	16.186	9.729	1.00	20.08	A
	ATOM	475	O	ARG	A	129	54.891	15.305	10.496	1.00	20.40	A
	ATOM	476	N	GLU	A	130	54.553	16.654	8.724	1.00	18.79	A
	ATOM	477	CA	GLU	A	130	53.222	16.125	8.454	1.00	20.10	A
	ATOM	478	CB	GLU	A	130	52.638	16.749	7.183	1.00	19.92	A
	ATOM	479	CG	GLU	A	130	51.350	16.087	6.708	1.00	27.85	A
	ATOM	480	CD	GLU	A	130	50.581	16.933	5.707	1.00	29.72	A
	ATOM	481	OE1	GLU	A	130	51.216	17.528	4.814	1.00	33.46	A
	ATOM	482	OE2	GLU	A	130	49.339	16.996	5.807	1.00	30.74	A
	ATOM	483	C	GLU	A	130	53.301	14.615	8.295	1.00	19.81	A
	ATOM	484	O	GLU	A	130	52.553	13.875	8.935	1.00	18.37	A

	ATOM	485	N	ARG	A	131	54.219	14.162	7.447	1.00	20.41	A
	ATOM	486	CA	ARG	A	131	54.397	12.735	7.202	1.00	22.45	A
	ATOM	487	CB	ARG	A	131	55.442	12.511	6.098	1.00	25.16	A
	ATOM	488	CG	ARG	A	131	55.742	11.043	5.840	1.00	28.75	A
5	ATOM	489	CD	ARG	A	131	56.736	10.837	4.708	1.00	33.75	A
	ATOM	490	NE	ARG	A	131	57.020	9.415	4.520	1.00	40.07	A
	ATOM	491	CZ	ARG	A	131	57.756	8.915	3.532	1.00	43.07	A
	ATOM	492	NH1	ARG	A	131	58.293	9.721	2.625	1.00	44.91	A
	ATOM	493	NH2	ARG	A	131	57.955	7.606	3.449	1.00	44.45	A
10	ATOM	494	C	ARG	A	131	54.820	11.982	8.466	1.00	23.24	A
	ATOM	495	O	ARG	A	131	54.241	10.948	8.804	1.00	23.86	A
	ATOM	496	N	ASP	A	132	55.831	12.497	9.160	1.00	21.99	A
	ATOM	497	CA	ASP	A	132	56.318	11.850	10.370	1.00	22.04	A
	ATOM	498	CB	ASP	A	132	57.570	12.564	10.888	1.00	23.72	A
15	ATOM	499	CG	ASP	A	132	58.750	12.442	9.932	1.00	27.77	A
	ATOM	500	OD1	ASP	A	132	58.681	11.620	8.989	1.00	27.34	A
	ATOM	501	OD2	ASP	A	132	59.753	13.163	10.128	1.00	28.70	A
	ATOM	502	C	ASP	A	132	55.258	11.772	11.474	1.00	21.69	A
	ATOM	503	O	ASP	A	132	55.077	10.723	12.092	1.00	22.75	A
20	ATOM	504	N	VAL	A	133	54.551	12.868	11.725	1.00	19.54	A
	ATOM	505	CA	VAL	A	133	53.525	12.843	12.759	1.00	18.52	A
	ATOM	506	CB	VAL	A	133	52.908	14.244	12.990	1.00	19.26	A
	ATOM	507	CG1	VAL	A	133	51.708	14.135	13.918	1.00	18.79	A
	ATOM	508	CG2	VAL	A	133	53.953	15.180	13.604	1.00	18.80	A
25	ATOM	509	C	VAL	A	133	52.419	11.854	12.398	1.00	19.46	A
	ATOM	510	O	VAL	A	133	52.073	10.991	13.200	1.00	19.94	A
	ATOM	511	N	MET	A	134	51.878	11.957	11.187	1.00	19.15	A
	ATOM	512	CA	MET	A	134	50.807	11.052	10.792	1.00	21.25	A
	ATOM	513	CB	MET	A	134	50.309	11.381	9.383	1.00	17.34	A
30	ATOM	514	CG	MET	A	134	49.615	12.730	9.302	1.00	20.00	A
	ATOM	515	SD	MET	A	134	48.643	12.952	7.798	1.00	24.21	A
	ATOM	516	CE	MET	A	134	47.033	12.434	8.400	1.00	23.20	A
	ATOM	517	C	MET	A	134	51.203	9.582	10.881	1.00	22.43	A
	ATOM	518	O	MET	A	134	50.384	8.741	11.249	1.00	23.82	A
35	ATOM	519	N	SER	A	135	52.454	9.273	10.556	1.00	23.09	A
	ATOM	520	CA	SER	A	135	52.939	7.895	10.615	1.00	26.13	A
	ATOM	521	CB	SER	A	135	54.356	7.798	10.039	1.00	26.17	A
	ATOM	522	OG	SER	A	135	54.383	8.177	8.673	1.00	31.91	A
	ATOM	523	C	SER	A	135	52.957	7.358	12.045	1.00	26.58	A
40	ATOM	524	O	SER	A	135	52.926	6.148	12.261	1.00	26.42	A
	ATOM	525	N	ARG	A	136	53.014	8.261	13.018	1.00	25.65	A
	ATOM	526	CA	ARG	A	136	53.056	7.870	14.425	1.00	27.47	A
	ATOM	527	CB	ARG	A	136	53.823	8.914	15.238	1.00	27.97	A
	ATOM	528	CG	ARG	A	136	55.283	9.082	14.857	1.00	32.00	A
45	ATOM	529	CD	ARG	A	136	55.904	10.218	15.664	1.00	33.03	A
	ATOM	530	NE	ARG	A	136	55.602	10.073	17.084	1.00	36.11	A
	ATOM	531	CZ	ARG	A	136	55.867	10.990	18.007	1.00	39.74	A
	ATOM	532	NH1	ARG	A	136	56.449	12.132	17.661	1.00	40.55	A
	ATOM	533	NH2	ARG	A	136	55.540	10.769	19.276	1.00	36.72	A
50	ATOM	534	C	ARG	A	136	51.667	7.709	15.036	1.00	26.38	A
	ATOM	535	O	ARG	A	136	51.516	7.121	16.106	1.00	27.06	A
	ATOM	536	N	LEU	A	137	50.655	8.235	14.360	1.00	24.77	A
	ATOM	537	CA	LEU	A	137	49.294	8.162	14.870	1.00	24.70	A
	ATOM	538	CB	LEU	A	137	48.483	9.363	14.371	1.00	24.52	A
55	ATOM	539	CG	LEU	A	137	49.050	10.760	14.662	1.00	26.67	A
	ATOM	540	CD1	LEU	A	137	48.075	11.813	14.141	1.00	27.25	A
	ATOM	541	CD2	LEU	A	137	49.279	10.945	16.155	1.00	27.09	A
	ATOM	542	C	LEU	A	137	48.592	6.868	14.473	1.00	25.20	A
	ATOM	543	O	LEU	A	137	48.619	6.469	13.309	1.00	25.99	A

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ATOM    544  N   ASP A 138      47.971   6.218  15.451  1.00 21.89      A
ATOM    545  CA  ASP A 138      47.239   4.977  15.219  1.00 21.35      A
ATOM    546  CB  ASP A 138      48.124   3.761  15.523  1.00 22.14      A
ATOM    547  CG  ASP A 138      47.432   2.448  15.201  1.00 24.90      A
ATOM    548  OD1 ASP A 138      46.631   2.423  14.241  1.00 24.78      A
ATOM    549  OD2 ASP A 138      47.691   1.443  15.897  1.00 25.39      A
ATOM    550  C   ASP A 138      46.031   4.991  16.138  1.00 20.47      A
ATOM    551  O   ASP A 138      45.967   4.248  17.118  1.00 19.06      A
ATOM    552  N   HIS A 139      45.075   5.852  15.810  1.00 18.27      A
ATOM    553  CA  HIS A 139      43.869   6.016  16.606  1.00 18.21      A
ATOM    554  CB  HIS A 139      44.096   7.157  17.612  1.00 15.84      A
ATOM    555  CG  HIS A 139      42.985   7.332  18.600  1.00 15.24      A
ATOM    556  CD2 HIS A 139      42.884   6.964  19.900  1.00 13.97      A
ATOM    557  ND1 HIS A 139      41.791   7.943  18.280  1.00 14.74      A
ATOM    558  CE1 HIS A 139      41.002   7.944  19.341  1.00 14.19      A
ATOM    559  NE2 HIS A 139      41.641   7.356  20.336  1.00 14.15      A
ATOM    560  C   HIS A 139      42.715   6.330  15.654  1.00 18.50      A
ATOM    561  O   HIS A 139      42.879   7.080  14.693  1.00 20.80      A
ATOM    562  N   PRO A 140      41.527   5.767  15.913  1.00 18.32      A
ATOM    563  CD  PRO A 140      41.143   4.984  17.100  1.00 16.71      A
ATOM    564  CA  PRO A 140      40.367   6.001  15.048  1.00 17.43      A
ATOM    565  CB  PRO A 140      39.273   5.157  15.704  1.00 16.64      A
ATOM    566  CG  PRO A 140      39.643   5.204  17.152  1.00 18.43      A
ATOM    567  C   PRO A 140      39.914   7.441  14.803  1.00 18.77      A
ATOM    568  O   PRO A 140      39.207   7.695  13.831  1.00 19.88      A
ATOM    569  N   PHE A 141      40.301   8.381  15.664  1.00 17.14      A
ATOM    570  CA  PHE A 141      39.874   9.767  15.477  1.00 16.42      A
ATOM    571  CB  PHE A 141      39.568  10.422  16.836  1.00 14.60      A
ATOM    572  CG  PHE A 141      38.386   9.817  17.556  1.00 15.26      A
ATOM    573  CD1 PHE A 141      37.335   9.234  16.842  1.00 14.78      A
ATOM    574  CD2 PHE A 141      38.297   9.880  18.942  1.00 13.70      A
ATOM    575  CE1 PHE A 141      36.215   8.727  17.502  1.00 16.94      A
ATOM    576  CE2 PHE A 141      37.178   9.375  19.615  1.00 15.75      A
ATOM    577  CZ  PHE A 141      36.135   8.799  18.893  1.00 16.89      A
ATOM    578  C   PHE A 141      40.857  10.641  14.694  1.00 16.15      A
ATOM    579  O   PHE A 141      40.799  11.871  14.761  1.00 17.35      A
ATOM    580  N   PHE A 142      41.748  10.011  13.941  1.00 15.88      A
ATOM    581  CA  PHE A 142      42.727  10.756  13.154  1.00 17.89      A
ATOM    582  CB  PHE A 142      44.115  10.645  13.793  1.00 17.57      A
ATOM    583  CG  PHE A 142      44.240  11.371  15.103  1.00 18.74      A
ATOM    584  CD1 PHE A 142      44.559  12.726  15.135  1.00 17.77      A
ATOM    585  CD2 PHE A 142      43.997  10.711  16.304  1.00 18.74      A
ATOM    586  CE1 PHE A 142      44.632  13.417  16.347  1.00 15.77      A
ATOM    587  CE2 PHE A 142      44.065  11.393  17.522  1.00 17.56      A
ATOM    588  CZ  PHE A 142      44.383  12.747  17.542  1.00 17.14      A
ATOM    589  C   PHE A 142      42.793  10.231  11.729  1.00 19.12      A
ATOM    590  O   PHE A 142      42.659   9.030  11.504  1.00 20.01      A
ATOM    591  N   VAL A 143      42.978  11.135  10.769  1.00 18.72      A
ATOM    592  CA  VAL A 143      43.102  10.735   9.371  1.00 18.52      A
ATOM    593  CB  VAL A 143      43.294  11.961   8.440  1.00 20.66      A
ATOM    594  CG1 VAL A 143      43.843  11.521   7.080  1.00 21.29      A
ATOM    595  CG2 VAL A 143      41.958  12.673   8.252  1.00 22.97      A
ATOM    596  C   VAL A 143      44.342   9.865   9.330  1.00 18.68      A
ATOM    597  O   VAL A 143      45.355  10.199   9.943  1.00 18.42      A
ATOM    598  N   LYS A 144      44.259   8.745   8.623  1.00 18.30      A
ATOM    599  CA  LYS A 144      45.384   7.824   8.535  1.00 18.78      A
ATOM    600  CB  LYS A 144      44.889   6.373   8.608  1.00 22.27      A
ATOM    601  CG  LYS A 144      46.017   5.340   8.557  1.00 29.72      A
ATOM    602  CD  LYS A 144      45.491   3.912   8.674  1.00 34.16      A
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	ATOM	603	CE	LYS	A	144	46.631	2.896	8.577	1.00	37.67	A
	ATOM	604	NZ	LYS	A	144	46.138	1.484	8.629	1.00	39.02	A
	ATOM	605	C	LYS	A	144	46.192	8.002	7.261	1.00	18.53	A
	ATOM	606	O	LYS	A	144	45.643	8.314	6.200	1.00	18.18	A
5	ATOM	607	N	LEU	A	145	47.502	7.816	7.385	1.00	16.79	A
	ATOM	608	CA	LEU	A	145	48.411	7.900	6.251	1.00	17.45	A
	ATOM	609	CB	LEU		145	49.686	8.653	6.641	0.50	18.82	AC1
	ATOM	610	CG	LEU		145	50.734	8.902	5.549	0.50	20.23	AC1
	ATOM	611	CD1	LEU		145	51.836	9.799	6.093	0.50	18.83	AC1
10	ATOM	612	CD2	LEU		145	51.317	7.581	5.069	0.50	19.79	AC1
	ATOM	613	C	LEU	A	145	48.739	6.450	5.907	1.00	19.19	A
	ATOM	614	O	LEU	A	145	49.451	5.772	6.659	1.00	17.36	A
	ATOM	615	N	TYR	A	146	48.215	5.972	4.782	1.00	17.28	A
	ATOM	616	CA	TYR	A	146	48.444	4.593	4.358	1.00	17.57	A
15	ATOM	617	CB	TYR	A	146	47.288	4.098	3.486	1.00	17.74	A
	ATOM	618	CG	TYR	A	146	45.981	3.926	4.214	1.00	17.50	A
	ATOM	619	CD1	TYR	A	146	45.099	4.995	4.377	1.00	16.50	A
	ATOM	620	CE1	TYR	A	146	43.881	4.827	5.039	1.00	17.10	A
	ATOM	621	CD2	TYR	A	146	45.620	2.686	4.735	1.00	18.28	A
20	ATOM	622	CE2	TYR	A	146	44.411	2.506	5.399	1.00	19.84	A
	ATOM	623	CZ	TYR	A	146	43.547	3.576	5.544	1.00	17.53	A
	ATOM	624	OH	TYR	A	146	42.342	3.376	6.169	1.00	20.67	A
	ATOM	625	C	TYR	A	146	49.735	4.376	3.582	1.00	18.72	A
	ATOM	626	O	TYR	A	146	50.382	3.338	3.715	1.00	19.51	A
25	ATOM	627	N	PHE	A	147	50.110	5.350	2.765	1.00	18.09	A
	ATOM	628	CA	PHE	A	147	51.307	5.203	1.952	1.00	17.20	A
	ATOM	629	CB	PHE	A	147	51.007	4.258	0.783	1.00	16.77	A
	ATOM	630	CG	PHE	A	147	49.835	4.699	-0.070	1.00	17.75	A
	ATOM	631	CD1	PHE	A	147	49.967	5.752	-0.975	1.00	16.58	A
30	ATOM	632	CD2	PHE	A	147	48.595	4.075	0.053	1.00	18.07	A
	ATOM	633	CE1	PHE	A	147	48.886	6.178	-1.742	1.00	19.62	A
	ATOM	634	CE2	PHE	A	147	47.503	4.492	-0.710	1.00	18.56	A
	ATOM	635	CZ	PHE	A	147	47.647	5.546	-1.610	1.00	19.27	A
	ATOM	636	C	PHE	A	147	51.768	6.533	1.395	1.00	17.13	A
35	ATOM	637	O	PHE	A	147	51.045	7.528	1.452	1.00	14.43	A
	ATOM	638	N	THR	A	148	52.981	6.534	0.854	1.00	17.12	A
	ATOM	639	CA	THR	A	148	53.541	7.718	0.232	1.00	17.96	A
	ATOM	640	CB	THR	A	148	54.449	8.531	1.197	1.00	21.51	A
	ATOM	641	OG1	THR	A	148	55.605	7.760	1.537	1.00	18.83	A
40	ATOM	642	CG2	THR	A	148	53.700	8.897	2.472	1.00	19.60	A
	ATOM	643	C	THR	A	148	54.386	7.262	-0.946	1.00	20.31	A
	ATOM	644	O	THR	A	148	54.860	6.124	-0.991	1.00	18.94	A
	ATOM	645	N	PHE	A	149	54.543	8.149	-1.916	1.00	19.16	A
	ATOM	646	CA	PHE	A	149	55.368	7.877	-3.073	1.00	18.01	A
45	ATOM	647	CB	PHE	A	149	54.748	6.801	-3.989	1.00	17.23	A
	ATOM	648	CG	PHE	A	149	53.389	7.144	-4.544	1.00	16.88	A
	ATOM	649	CD1	PHE	A	149	53.262	7.888	-5.712	1.00	18.58	A
	ATOM	650	CD2	PHE	A	149	52.235	6.668	-3.927	1.00	17.31	A
	ATOM	651	CE1	PHE	A	149	52.007	8.149	-6.267	1.00	19.26	A
50	ATOM	652	CE2	PHE	A	149	50.972	6.923	-4.470	1.00	19.17	A
	ATOM	653	CZ	PHE	A	149	50.858	7.663	-5.642	1.00	19.60	A
	ATOM	654	C	PHE	A	149	55.542	9.205	-3.774	1.00	20.85	A
	ATOM	655	O	PHE	A	149	54.934	10.200	-3.376	1.00	19.76	A
	ATOM	656	N	GLN	A	150	56.398	9.241	-4.782	1.00	19.79	A
55	ATOM	657	CA	GLN	A	150	56.636	10.481	-5.497	1.00	24.03	A
	ATOM	658	CB	GLN	A	150	57.659	11.347	-4.739	1.00	24.45	A
	ATOM	659	CG	GLN	A	150	58.986	10.645	-4.414	1.00	26.28	A
	ATOM	660	CD	GLN	A	150	59.988	11.558	-3.692	1.00	29.02	A
	ATOM	661	OE1	GLN	A	150	60.693	12.353	-4.321	1.00	27.05	A

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ATOM    662  NE2 GLN A 150      60.042  11.449  -2.365  1.00 26.47      A
ATOM    663  C   GLN A 150      57.160  10.203  -6.885  1.00 23.88      A
ATOM    664  O   GLN A 150      57.673   9.118  -7.158  1.00 24.79      A
ATOM    665  N   ASP A 151      56.987  11.171  -7.774  1.00 25.88      A
ATOM    666  CA  ASP A 151      57.527  11.047  -9.117  1.00 26.49      A
ATOM    667  CB  ASP A 151      56.437  11.126 -10.199  1.00 24.54      A
ATOM    668  CG  ASP A 151      55.544  12.336 -10.064  1.00 24.95      A
ATOM    669  OD1 ASP A 151      56.005  13.379  -9.561  1.00 22.44      A
ATOM    670  OD2 ASP A 151      54.369  12.242 -10.490  1.00 25.72      A
ATOM    671  C   ASP A 151      58.515  12.203  -9.220  1.00 28.63      A
ATOM    672  O   ASP A 151      58.890  12.780  -8.194  1.00 27.83      A
ATOM    673  N   ASP A 152      58.934  12.560 -10.426  1.00 29.21      A
ATOM    674  CA  ASP A 152      59.907  13.636 -10.562  1.00 31.88      A
ATOM    675  CB  ASP A 152      60.325  13.792 -12.026  1.00 33.94      A
ATOM    676  CG  ASP A 152      61.033  12.564 -12.557  1.00 38.88      A
ATOM    677  OD1 ASP A 152      61.817  11.959 -11.791  1.00 39.67      A
ATOM    678  OD2 ASP A 152      60.817  12.211 -13.738  1.00 41.57      A
ATOM    679  C   ASP A 152      59.487  14.994 -10.013  1.00 30.90      A
ATOM    680  O   ASP A 152      60.316  15.735  -9.482  1.00 31.69      A
ATOM    681  N   GLU A 153      58.207  15.322 -10.107  1.00 29.44      A
ATOM    682  CA  GLU A 153      57.767  16.632  -9.646  1.00 28.69      A
ATOM    683  CB  GLU A 153      56.984  17.327 -10.766  1.00 32.90      A
ATOM    684  CG  GLU A 153      57.451  16.987 -12.183  1.00 40.57      A
ATOM    685  CD  GLU A 153      56.920  15.643 -12.675  1.00 45.78      A
ATOM    686  OE1 GLU A 153      55.682  15.482 -12.760  1.00 48.91      A
ATOM    687  OE2 GLU A 153      57.736  14.747 -12.979  1.00 48.95      A
ATOM    688  C   GLU A 153      56.929  16.683  -8.372  1.00 26.43      A
ATOM    689  O   GLU A 153      56.947  17.688  -7.660  1.00 25.08      A
ATOM    690  N   LYS A 154      56.205  15.610  -8.069  1.00 22.39      A
ATOM    691  CA  LYS A 154      55.318  15.631  -6.912  1.00 21.43      A
ATOM    692  CB  LYS A 154      53.861  15.628  -7.398  1.00 20.33      A
ATOM    693  CG  LYS A 154      53.505  16.716  -8.403  1.00 21.92      A
ATOM    694  CD  LYS A 154      52.211  16.375  -9.146  1.00 19.70      A
ATOM    695  CE  LYS A 154      51.775  17.503 -10.077  1.00 20.04      A
ATOM    696  NZ  LYS A 154      50.631  17.094 -10.951  1.00 19.97      A
ATOM    697  C   LYS A 154      55.458  14.522  -5.881  1.00 20.43      A
ATOM    698  O   LYS A 154      55.949  13.426  -6.173  1.00 21.13      A
ATOM    699  N   LEU A 155      54.985  14.832  -4.676  1.00 19.69      A
ATOM    700  CA  LEU A 155      54.950  13.900  -3.553  1.00 19.10      A
ATOM    701  CB  LEU A 155      55.362  14.588  -2.252  1.00 19.65      A
ATOM    702  CG  LEU A 155      56.740  15.234  -2.129  1.00 21.20      A
ATOM    703  CD1 LEU A 155      56.848  15.918  -0.770  1.00 23.42      A
ATOM    704  CD2 LEU A 155      57.816  14.174  -2.277  1.00 23.08      A
ATOM    705  C   LEU A 155      53.478  13.507  -3.427  1.00 18.87      A
ATOM    706  O   LEU A 155      52.600  14.348  -3.620  1.00 18.61      A
ATOM    707  N   TYR A 156      53.209  12.249  -3.091  1.00 15.02      A
ATOM    708  CA  TYR A 156      51.834  11.783  -2.934  1.00 16.29      A
ATOM    709  CB  TYR A 156      51.470  10.769  -4.029  1.00 14.20      A
ATOM    710  CG  TYR A 156      51.603  11.273  -5.449  1.00 17.29      A
ATOM    711  CD1 TYR A 156      52.857  11.429  -6.045  1.00 16.46      A
ATOM    712  CE1 TYR A 156      52.978  11.884  -7.360  1.00 18.68      A
ATOM    713  CD2 TYR A 156      50.474  11.588  -6.202  1.00 16.43      A
ATOM    714  CE2 TYR A 156      50.583  12.048  -7.512  1.00 16.31      A
ATOM    715  CZ  TYR A 156      51.835  12.192  -8.083  1.00 18.17      A
ATOM    716  OH  TYR A 156      51.941  12.651  -9.371  1.00 17.47      A
ATOM    717  C   TYR A 156      51.657  11.108  -1.572  1.00 16.32      A
ATOM    718  O   TYR A 156      52.412  10.197  -1.235  1.00 16.27      A
ATOM    719  N   PHE A 157      50.678  11.568  -0.792  1.00 15.47      A
ATOM    720  CA  PHE A 157      50.385  10.966   0.508  1.00 16.66      A
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	ATOM	721	CB	PHE	A	157	50.324	12.014	1.629	1.00	16.91	A
	ATOM	722	CG	PHE	A	157	51.631	12.708	1.907	1.00	18.96	A
	ATOM	723	CD1	PHE	A	157	52.821	12.261	1.340	1.00	20.31	A
	ATOM	724	CD2	PHE	A	157	51.664	13.829	2.732	1.00	21.12	A
5	ATOM	725	CE1	PHE	A	157	54.025	12.926	1.585	1.00	22.08	A
	ATOM	726	CE2	PHE	A	157	52.865	14.500	2.982	1.00	22.18	A
	ATOM	727	CZ	PHE	A	157	54.045	14.045	2.405	1.00	21.27	A
	ATOM	728	C	PHE	A	157	49.016	10.308	0.404	1.00	16.52	A
	ATOM	729	O	PHE	A	157	48.029	10.979	0.110	1.00	17.32	A
10	ATOM	730	N	GLY	A	158	48.953	9.002	0.644	1.00	15.97	A
	ATOM	731	CA	GLY	A	158	47.684	8.299	0.572	1.00	16.13	A
	ATOM	732	C	GLY	A	158	47.000	8.383	1.920	1.00	14.94	A
	ATOM	733	O	GLY	A	158	47.445	7.756	2.879	1.00	16.28	A
	ATOM	734	N	LEU	A	159	45.915	9.145	1.989	1.00	13.50	A
15	ATOM	735	CA	LEU	A	159	45.191	9.340	3.241	1.00	15.20	A
	ATOM	736	CB	LEU	A	159	45.031	10.835	3.517	1.00	14.20	A
	ATOM	737	CG	LEU	A	159	46.270	11.726	3.385	1.00	19.00	A
	ATOM	738	CD1	LEU	A	159	45.847	13.188	3.477	1.00	17.12	A
	ATOM	739	CD2	LEU	A	159	47.275	11.390	4.471	1.00	14.71	A
20	ATOM	740	C	LEU	A	159	43.809	8.716	3.232	1.00	15.53	A
	ATOM	741	O	LEU	A	159	43.232	8.472	2.177	1.00	16.05	A
	ATOM	742	N	SER	A	160	43.268	8.469	4.418	1.00	15.86	A
	ATOM	743	CA	SER	A	160	41.932	7.917	4.498	1.00	19.01	A
	ATOM	744	CB	SER	A	160	41.566	7.582	5.949	1.00	22.90	A
25	ATOM	745	OG	SER	A	160	41.901	8.629	6.833	1.00	24.18	A
	ATOM	746	C	SER	A	160	40.987	8.968	3.924	1.00	20.43	A
	ATOM	747	O	SER	A	160	41.213	10.173	4.062	1.00	19.96	A
	ATOM	748	N	TYR	A	161	39.945	8.508	3.250	1.00	19.20	A
	ATOM	749	CA	TYR	A	161	38.975	9.406	2.644	1.00	20.37	A
30	ATOM	750	CB	TYR	A	161	38.471	8.785	1.332	1.00	20.00	A
	ATOM	751	CG	TYR	A	161	37.314	9.502	0.666	1.00	20.72	A
	ATOM	752	CD1	TYR	A	161	37.222	10.895	0.682	1.00	18.22	A
	ATOM	753	CE1	TYR	A	161	36.180	11.557	0.029	1.00	22.24	A
	ATOM	754	CD2	TYR	A	161	36.333	8.784	-0.020	1.00	20.53	A
35	ATOM	755	CE2	TYR	A	161	35.287	9.436	-0.678	1.00	24.24	A
	ATOM	756	CZ	TYR	A	161	35.218	10.822	-0.648	1.00	22.32	A
	ATOM	757	OH	TYR	A	161	34.194	11.471	-1.298	1.00	23.03	A
	ATOM	758	C	TYR	A	161	37.812	9.681	3.598	1.00	20.14	A
	ATOM	759	O	TYR	A	161	36.959	8.819	3.810	1.00	19.53	A
40	ATOM	760	N	ALA	A	162	37.791	10.880	4.178	1.00	19.92	A
	ATOM	761	CA	ALA	A	162	36.721	11.271	5.099	1.00	21.07	A
	ATOM	762	CB	ALA	A	162	37.187	12.419	6.002	1.00	19.60	A
	ATOM	763	C	ALA	A	162	35.542	11.712	4.238	1.00	22.07	A
	ATOM	764	O	ALA	A	162	35.436	12.875	3.860	1.00	20.66	A
45	ATOM	765	N	LYS	A	163	34.653	10.769	3.945	1.00	23.27	A
	ATOM	766	CA	LYS	A	163	33.503	11.017	3.080	1.00	27.12	A
	ATOM	767	CB	LYS	A	163	32.663	9.741	2.963	1.00	29.68	A
	ATOM	768	CG	LYS	A	163	33.455	8.524	2.515	1.00	37.67	A
	ATOM	769	CD	LYS	A	163	32.556	7.310	2.321	1.00	42.24	A
50	ATOM	770	CE	LYS	A	163	33.373	6.034	2.185	1.00	44.48	A
	ATOM	771	NZ	LYS	A	163	34.143	5.735	3.430	1.00	44.88	A
	ATOM	772	C	LYS	A	163	32.581	12.186	3.411	1.00	25.78	A
	ATOM	773	O	LYS	A	163	32.103	12.863	2.506	1.00	26.53	A
	ATOM	774	N	ASN	A	164	32.327	12.441	4.689	1.00	24.57	A
55	ATOM	775	CA	ASN	A	164	31.420	13.522	5.033	1.00	23.77	A
	ATOM	776	CB	ASN	A	164	30.610	13.129	6.265	1.00	25.02	A
	ATOM	777	CG	ASN	A	164	29.537	12.101	5.932	1.00	27.54	A
	ATOM	778	OD1	ASN	A	164	28.772	12.281	4.983	1.00	28.79	A
	ATOM	779	ND2	ASN	A	164	29.475	11.024	6.704	1.00	27.13	A

ATOM	780	C	ASN	A	164	31.999	14.931	5.169	1.00	24.43	A
ATOM	781	O	ASN	A	164	31.306	15.856	5.589	1.00	23.98	A
ATOM	782	N	GLY	A	165	33.262	15.097	4.795	1.00	21.56	A
ATOM	783	CA	GLY	A	165	33.873	16.414	4.836	1.00	24.39	A
ATOM	784	C	GLY	A	165	34.191	17.043	6.181	1.00	23.62	A
ATOM	785	O	GLY	A	165	34.380	16.352	7.177	1.00	23.26	A
ATOM	786	N	GLU	A	166	34.234	18.373	6.186	1.00	23.22	A
ATOM	787	CA	GLU	A	166	34.563	19.176	7.362	1.00	24.54	A
ATOM	788	CB	GLU	A	166	35.055	20.558	6.913	1.00	25.04	A
ATOM	789	CG	GLU	A	166	36.419	20.569	6.229	1.00	26.48	A
ATOM	790	CD	GLU	A	166	36.699	21.889	5.517	1.00	30.02	A
ATOM	791	OE1	GLU	A	166	36.081	22.906	5.889	1.00	29.33	A
ATOM	792	OE2	GLU	A	166	37.544	21.916	4.596	1.00	30.48	A
ATOM	793	C	GLU	A	166	33.436	19.372	8.369	1.00	24.44	A
ATOM	794	O	GLU	A	166	32.279	19.541	8.001	1.00	22.76	A
ATOM	795	N	LEU	A	167	33.791	19.370	9.649	1.00	22.95	A
ATOM	796	CA	LEU	A	167	32.813	19.581	10.707	1.00	22.26	A
ATOM	797	CB	LEU	A	167	33.497	19.481	12.073	1.00	22.32	A
ATOM	798	CG	LEU	A	167	32.706	19.923	13.306	1.00	22.04	A
ATOM	799	CD1	LEU	A	167	31.454	19.074	13.463	1.00	19.66	A
ATOM	800	CD2	LEU	A	167	33.597	19.805	14.537	1.00	21.17	A
ATOM	801	C	LEU	A	167	32.193	20.971	10.529	1.00	23.49	A
ATOM	802	O	LEU	A	167	31.047	21.209	10.907	1.00	23.56	A
ATOM	803	N	LEU	A	168	32.960	21.887	9.948	1.00	24.25	A
ATOM	804	CA	LEU	A	168	32.473	23.245	9.722	1.00	26.64	A
ATOM	805	CB	LEU	A	168	33.560	24.099	9.066	1.00	25.62	A
ATOM	806	CG	LEU	A	168	33.198	25.546	8.707	1.00	27.34	A
ATOM	807	CD1	LEU	A	168	32.718	26.296	9.946	1.00	26.42	A
ATOM	808	CD2	LEU	A	168	34.418	26.238	8.119	1.00	26.74	A
ATOM	809	C	LEU	A	168	31.234	23.218	8.829	1.00	27.13	A
ATOM	810	O	LEU	A	168	30.297	23.989	9.030	1.00	26.01	A
ATOM	811	N	LYS	A	169	31.233	22.320	7.848	1.00	26.41	A
ATOM	812	CA	LYS	A	169	30.106	22.210	6.934	1.00	27.70	A
ATOM	813	CB	LYS	A	169	30.324	21.064	5.945	1.00	30.49	A
ATOM	814	CG	LYS	A	169	29.151	20.854	4.993	1.00	32.47	A
ATOM	815	CD	LYS	A	169	29.407	19.728	3.998	1.00	35.98	A
ATOM	816	CE	LYS	A	169	29.462	18.372	4.683	1.00	38.53	A
ATOM	817	NZ	LYS	A	169	29.622	17.263	3.702	1.00	41.00	A
ATOM	818	C	LYS	A	169	28.801	21.985	7.682	1.00	28.12	A
ATOM	819	O	LYS	A	169	27.785	22.608	7.371	1.00	28.08	A
ATOM	820	N	TYR	A	170	28.826	21.094	8.668	1.00	26.53	A
ATOM	821	CA	TYR	A	170	27.624	20.791	9.434	1.00	26.95	A
ATOM	822	CB	TYR	A	170	27.810	19.476	10.193	1.00	25.03	A
ATOM	823	CG	TYR	A	170	27.898	18.300	9.251	1.00	26.65	A
ATOM	824	CD1	TYR	A	170	26.745	17.661	8.790	1.00	28.27	A
ATOM	825	CE1	TYR	A	170	26.814	16.642	7.839	1.00	26.85	A
ATOM	826	CD2	TYR	A	170	29.127	17.884	8.742	1.00	27.83	A
ATOM	827	CE2	TYR	A	170	29.209	16.869	7.792	1.00	27.19	A
ATOM	828	CZ	TYR	A	170	28.049	16.254	7.343	1.00	30.02	A
ATOM	829	OH	TYR	A	170	28.130	15.268	6.382	1.00	29.23	A
ATOM	830	C	TYR	A	170	27.229	21.918	10.376	1.00	27.59	A
ATOM	831	O	TYR	A	170	26.045	22.122	10.642	1.00	29.25	A
ATOM	832	N	ILE	A	171	28.208	22.660	10.882	1.00	28.16	A
ATOM	833	CA	ILE	A	171	27.883	23.770	11.763	1.00	29.03	A
ATOM	834	CB	ILE	A	171	29.151	24.435	12.337	1.00	27.51	A
ATOM	835	CG2	ILE	A	171	28.773	25.705	13.084	1.00	27.97	A
ATOM	836	CG1	ILE	A	171	29.872	23.458	13.272	1.00	26.70	A
ATOM	837	CD1	ILE	A	171	31.163	23.996	13.856	1.00	24.07	A
ATOM	838	C	ILE	A	171	27.094	24.796	10.944	1.00	31.41	A

	ATOM	839	O	ILE	A	171	26.088	25.335	11.407	1.00	31.69	A
	ATOM	840	N	ARG	A	172	27.546	25.047	9.719	1.00	33.21	A
	ATOM	841	CA	ARG	A	172	26.874	26.000	8.844	1.00	36.54	A
	ATOM	842	CB	ARG	A	172	27.734	26.314	7.616	1.00	37.73	A
5	ATOM	843	CG	ARG	A	172	29.057	27.011	7.912	1.00	41.65	A
	ATOM	844	CD	ARG	A	172	29.708	27.492	6.616	1.00	45.29	A
	ATOM	845	NE	ARG	A	172	31.037	28.070	6.812	1.00	48.51	A
	ATOM	846	CZ	ARG	A	172	31.314	29.059	7.658	1.00	51.53	A
	ATOM	847	NH1	ARG	A	172	30.355	29.593	8.406	1.00	53.75	A
10	ATOM	848	NH2	ARG	A	172	32.553	29.526	7.748	1.00	51.21	A
	ATOM	849	C	ARG	A	172	25.528	25.459	8.378	1.00	37.67	A
	ATOM	850	O	ARG	A	172	24.550	26.200	8.288	1.00	39.09	A
	ATOM	851	N	LYS	A	173	25.481	24.163	8.092	1.00	38.44	A
	ATOM	852	CA	LYS	A	173	24.259	23.528	7.619	1.00	39.25	A
15	ATOM	853	CB	LYS	A	173	24.523	22.061	7.272	1.00	41.89	A
	ATOM	854	CG	LYS	A	173	23.279	21.298	6.830	1.00	45.52	A
	ATOM	855	CD	LYS	A	173	23.557	19.808	6.653	1.00	49.60	A
	ATOM	856	CE	LYS	A	173	24.477	19.530	5.469	1.00	52.63	A
	ATOM	857	NZ	LYS	A	173	23.855	19.894	4.160	1.00	54.61	A
20	ATOM	858	C	LYS	A	173	23.089	23.608	8.595	1.00	39.30	A
	ATOM	859	O	LYS	A	173	21.981	23.960	8.201	1.00	39.62	A
	ATOM	860	N	ILE	A	174	23.320	23.282	9.863	1.00	37.96	A
	ATOM	861	CA	ILE	A	174	22.229	23.314	10.833	1.00	37.36	A
	ATOM	862	CB	ILE	A	174	22.159	21.998	11.652	1.00	37.44	A
25	ATOM	863	CG2	ILE	A	174	22.058	20.802	10.709	1.00	38.37	A
	ATOM	864	CG1	ILE	A	174	23.397	21.850	12.532	1.00	37.25	A
	ATOM	865	CD1	ILE	A	174	23.355	20.620	13.418	1.00	36.85	A
	ATOM	866	C	ILE	A	174	22.259	24.492	11.801	1.00	36.71	A
	ATOM	867	O	ILE	A	174	21.448	24.556	12.724	1.00	38.05	A
30	ATOM	868	N	GLY	A	175	23.185	25.423	11.592	1.00	35.48	A
	ATOM	869	CA	GLY	A	175	23.265	26.585	12.462	1.00	35.29	A
	ATOM	870	C	GLY	A	175	24.053	26.360	13.737	1.00	35.06	A
	ATOM	871	O	GLY	A	175	25.066	27.019	13.970	1.00	37.46	A
	ATOM	872	N	SER	A	176	23.581	25.441	14.571	1.00	33.94	A
35	ATOM	873	CA	SER	A	176	24.253	25.113	15.822	1.00	32.84	A
	ATOM	874	CB	SER	A	176	23.938	26.155	16.901	1.00	33.54	A
	ATOM	875	OG	SER	A	176	22.599	26.056	17.347	1.00	34.86	A
	ATOM	876	C	SER	A	176	23.796	23.731	16.276	1.00	32.34	A
	ATOM	877	O	SER	A	176	22.726	23.263	15.884	1.00	32.82	A
40	ATOM	878	N	PHE	A	177	24.609	23.085	17.103	1.00	29.39	A
	ATOM	879	CA	PHE	A	177	24.313	21.743	17.597	1.00	27.20	A
	ATOM	880	CB	PHE	A	177	25.621	20.989	17.865	1.00	26.39	A
	ATOM	881	CG	PHE	A	177	26.372	20.585	16.622	1.00	26.18	A
	ATOM	882	CD1	PHE	A	177	26.210	21.277	15.426	1.00	25.30	A
45	ATOM	883	CD2	PHE	A	177	27.266	19.516	16.662	1.00	26.05	A
	ATOM	884	CE1	PHE	A	177	26.923	20.912	14.290	1.00	26.59	A
	ATOM	885	CE2	PHE	A	177	27.986	19.143	15.532	1.00	26.06	A
	ATOM	886	CZ	PHE	A	177	27.815	19.841	14.343	1.00	25.42	A
	ATOM	887	C	PHE	A	177	23.500	21.752	18.884	1.00	27.00	A
50	ATOM	888	O	PHE	A	177	23.704	22.610	19.747	1.00	26.48	A
	ATOM	889	N	ASP	A	178	22.578	20.802	19.022	1.00	26.70	A
	ATOM	890	CA	ASP	A	178	21.816	20.729	20.260	1.00	26.35	A
	ATOM	891	CB	ASP	A	178	20.621	19.773	20.142	1.00	29.90	A
	ATOM	892	CG	ASP	A	178	21.020	18.372	19.720	1.00	32.28	A
55	ATOM	893	OD1	ASP	A	178	22.157	17.949	20.014	1.00	35.21	A
	ATOM	894	OD2	ASP	A	178	20.179	17.683	19.105	1.00	34.79	A
	ATOM	895	C	ASP	A	178	22.810	20.228	21.311	1.00	25.03	A
	ATOM	896	O	ASP	A	178	23.974	19.968	20.992	1.00	21.24	A
	ATOM	897	N	GLU	A	179	22.361	20.083	22.552	1.00	23.60	A

	ATOM	898	CA	GLU	A	179	23.247	19.644	23.619	1.00	25.18	A
	ATOM	899	CB	GLU	A	179	22.542	19.770	24.971	1.00	27.60	A
	ATOM	900	CG	GLU	A	179	23.324	19.176	26.130	1.00	32.58	A
	ATOM	901	CD	GLU	A	179	22.997	19.845	27.449	1.00	35.82	A
5	ATOM	902	OE1	GLU	A	179	21.825	20.224	27.645	1.00	35.95	A
	ATOM	903	OE2	GLU	A	179	23.912	19.984	28.291	1.00	38.19	A
	ATOM	904	C	GLU	A	179	23.808	18.235	23.450	1.00	24.08	A
	ATOM	905	O	GLU	A	179	24.977	17.989	23.756	1.00	22.79	A
	ATOM	906	N	THR	A	180	22.983	17.316	22.961	1.00	23.36	A
10	ATOM	907	CA	THR	A	180	23.412	15.935	22.761	1.00	22.15	A
	ATOM	908	CB	THR	A	180	22.224	15.054	22.320	1.00	23.77	A
	ATOM	909	OG1	THR	A	180	21.222	15.075	23.341	1.00	26.37	A
	ATOM	910	CG2	THR	A	180	22.670	13.616	22.088	1.00	22.66	A
	ATOM	911	C	THR	A	180	24.533	15.830	21.724	1.00	22.01	A
15	ATOM	912	O	THR	A	180	25.533	15.141	21.944	1.00	19.87	A
	ATOM	913	N	CYS	A	181	24.365	16.511	20.596	1.00	21.21	A
	ATOM	914	CA	CYS	A	181	25.372	16.480	19.541	1.00	22.22	A
	ATOM	915	CB	CYS	A	181	24.800	17.065	18.250	1.00	24.62	A
	ATOM	916	SG	CYS	A	181	23.435	16.080	17.560	1.00	29.50	A
20	ATOM	917	C	CYS	A	181	26.633	17.232	19.954	1.00	23.07	A
	ATOM	918	O	CYS	A	181	27.746	16.827	19.608	1.00	23.95	A
	ATOM	919	N	THR	A	182	26.463	18.325	20.695	1.00	22.76	A
	ATOM	920	CA	THR	A	182	27.606	19.103	21.161	1.00	21.49	A
	ATOM	921	CB	THR	A	182	27.167	20.346	21.978	1.00	21.37	A
25	ATOM	922	OG1	THR	A	182	26.459	21.262	21.134	1.00	22.50	A
	ATOM	923	CG2	THR	A	182	28.379	21.046	22.565	1.00	18.36	A
	ATOM	924	C	THR	A	182	28.454	18.215	22.071	1.00	21.48	A
	ATOM	925	O	THR	A	182	29.669	18.090	21.894	1.00	19.95	A
	ATOM	926	N	ARG	A	183	27.798	17.602	23.050	1.00	18.97	A
30	ATOM	927	CA	ARG	A	183	28.468	16.723	23.996	1.00	19.39	A
	ATOM	928	CB	ARG		183	27.455	16.140	24.984	0.50	19.46	AC1
	ATOM	929	CG	ARG		183	28.030	15.062	25.887	0.50	18.77	AC1
	ATOM	930	CD	ARG		183	27.021	14.571	26.925	0.50	21.19	AC1
	ATOM	931	NE	ARG		183	26.605	15.642	27.824	0.50	19.46	AC1
35	ATOM	932	CZ	ARG		183	25.496	16.362	27.679	0.50	20.45	AC1
	ATOM	933	NH1	ARG		183	24.672	16.123	26.666	0.50	19.81	AC1
	ATOM	934	NH2	ARG		183	25.224	17.338	28.539	0.50	17.11	AC1
	ATOM	935	C	ARG	A	183	29.206	15.577	23.302	1.00	20.02	A
	ATOM	936	O	ARG	A	183	30.383	15.333	23.573	1.00	19.97	A
40	ATOM	937	N	PHE	A	184	28.520	14.871	22.409	1.00	19.24	A
	ATOM	938	CA	PHE	A	184	29.144	13.746	21.722	1.00	18.04	A
	ATOM	939	CB	PHE	A	184	28.158	13.078	20.764	1.00	21.05	A
	ATOM	940	CG	PHE	A	184	28.719	11.857	20.098	1.00	22.67	A
	ATOM	941	CD1	PHE	A	184	28.717	10.630	20.754	1.00	22.97	A
45	ATOM	942	CD2	PHE	A	184	29.317	11.949	18.850	1.00	19.97	A
	ATOM	943	CE1	PHE	A	184	29.308	9.510	20.176	1.00	23.53	A
	ATOM	944	CE2	PHE	A	184	29.915	10.833	18.263	1.00	24.11	A
	ATOM	945	CZ	PHE	A	184	29.910	9.613	18.928	1.00	22.97	A
	ATOM	946	C	PHE	A	184	30.403	14.127	20.941	1.00	17.99	A
50	ATOM	947	O	PHE	A	184	31.461	13.531	21.130	1.00	18.89	A
	ATOM	948	N	TYR	A	185	30.292	15.110	20.056	1.00	15.73	A
	ATOM	949	CA	TYR	A	185	31.443	15.519	19.265	1.00	15.72	A
	ATOM	950	CB	TYR	A	185	30.992	16.413	18.111	1.00	17.33	A
	ATOM	951	CG	TYR	A	185	30.364	15.584	17.015	1.00	19.37	A
55	ATOM	952	CD1	TYR	A	185	31.159	14.809	16.168	1.00	16.53	A
	ATOM	953	CE1	TYR	A	185	30.590	13.952	15.232	1.00	18.12	A
	ATOM	954	CD2	TYR	A	185	28.976	15.484	16.892	1.00	18.18	A
	ATOM	955	CE2	TYR	A	185	28.398	14.623	15.956	1.00	18.90	A
	ATOM	956	CZ	TYR	A	185	29.211	13.861	15.133	1.00	18.41	A

	ATOM	957	OH	TYR	A	185	28.650	12.995	14.218	1.00	20.48	A
	ATOM	958	C	TYR	A	185	32.544	16.172	20.083	1.00	15.79	A
	ATOM	959	O	TYR	A	185	33.720	16.015	19.766	1.00	17.69	A
	ATOM	960	N	THR	A	186	32.176	16.887	21.142	1.00	15.68	A
5	ATOM	961	CA	THR	A	186	33.184	17.504	21.997	1.00	16.03	A
	ATOM	962	CB	THR	A	186	32.559	18.403	23.094	1.00	16.62	A
	ATOM	963	OG1	THR	A	186	31.866	19.503	22.481	1.00	14.79	A
	ATOM	964	CG2	THR	A	186	33.656	18.953	24.019	1.00	14.68	A
	ATOM	965	C	THR	A	186	33.954	16.375	22.680	1.00	15.59	A
10	ATOM	966	O	THR	A	186	35.176	16.443	22.823	1.00	13.77	A
	ATOM	967	N	ALA	A	187	33.234	15.333	23.097	1.00	14.06	A
	ATOM	968	CA	ALA	A	187	33.869	14.196	23.757	1.00	14.74	A
	ATOM	969	CB	ALA	A	187	32.810	13.195	24.224	1.00	14.32	A
	ATOM	970	C	ALA	A	187	34.875	13.509	22.821	1.00	14.41	A
15	ATOM	971	O	ALA	A	187	35.972	13.136	23.247	1.00	15.61	A
	ATOM	972	N	GLU	A	188	34.516	13.340	21.549	1.00	14.01	A
	ATOM	973	CA	GLU	A	188	35.443	12.704	20.615	1.00	13.50	A
	ATOM	974	CB	GLU	A	188	34.782	12.449	19.251	1.00	12.85	A
	ATOM	975	CG	GLU	A	188	33.622	11.454	19.282	1.00	12.71	A
20	ATOM	976	CD	GLU	A	188	33.464	10.685	17.979	1.00	15.01	A
	ATOM	977	OE1	GLU	A	188	33.687	11.275	16.899	1.00	13.21	A
	ATOM	978	OE2	GLU	A	188	33.110	9.484	18.031	1.00	17.69	A
	ATOM	979	C	GLU	A	188	36.682	13.582	20.436	1.00	13.34	A
	ATOM	980	O	GLU	A	188	37.803	13.085	20.408	1.00	14.69	A
25	ATOM	981	N	ILE	A	189	36.486	14.893	20.326	1.00	13.52	A
	ATOM	982	CA	ILE	A	189	37.627	15.787	20.159	1.00	13.35	A
	ATOM	983	CB	ILE	A	189	37.169	17.247	19.939	1.00	13.95	A
	ATOM	984	CG2	ILE	A	189	38.381	18.165	19.822	1.00	12.47	A
	ATOM	985	CG1	ILE	A	189	36.302	17.332	18.671	1.00	13.44	A
30	ATOM	986	CD1	ILE	A	189	35.588	18.664	18.491	1.00	14.29	A
	ATOM	987	C	ILE	A	189	38.530	15.702	21.394	1.00	14.63	A
	ATOM	988	O	ILE	A	189	39.753	15.595	21.271	1.00	12.97	A
	ATOM	989	N	VAL	A	190	37.927	15.751	22.582	1.00	14.35	A
	ATOM	990	CA	VAL	A	190	38.684	15.655	23.832	1.00	13.22	A
35	ATOM	991	CB	VAL	A	190	37.743	15.690	25.061	1.00	14.28	A
	ATOM	992	CG1	VAL	A	190	38.509	15.267	26.326	1.00	15.08	A
	ATOM	993	CG2	VAL	A	190	37.160	17.082	25.233	1.00	12.08	A
	ATOM	994	C	VAL	A	190	39.468	14.338	23.859	1.00	14.61	A
	ATOM	995	O	VAL	A	190	40.634	14.304	24.250	1.00	13.72	A
40	ATOM	996	N	SER	A	191	38.825	13.254	23.432	1.00	15.26	A
	ATOM	997	CA	SER	A	191	39.478	11.943	23.421	1.00	16.81	A
	ATOM	998	CB	SER		191	38.470	10.857	23.041	0.50	16.14	AC1
	ATOM	999	OG	SER		191	39.018	9.569	23.238	0.50	16.94	AC1
	ATOM	1000	C	SER	A	191	40.649	11.928	22.441	1.00	16.58	A
45	ATOM	1001	O	SER	A	191	41.697	11.335	22.713	1.00	13.96	A
	ATOM	1002	N	ALA	A	192	40.468	12.586	21.300	1.00	15.26	A
	ATOM	1003	CA	ALA	A	192	41.518	12.645	20.292	1.00	14.37	A
	ATOM	1004	CB	ALA	A	192	40.989	13.296	19.016	1.00	14.43	A
	ATOM	1005	C	ALA	A	192	42.695	13.440	20.845	1.00	16.46	A
50	ATOM	1006	O	ALA	A	192	43.851	13.038	20.697	1.00	17.96	A
	ATOM	1007	N	LEU	A	193	42.401	14.563	21.496	1.00	15.02	A
	ATOM	1008	CA	LEU	A	193	43.459	15.392	22.067	1.00	15.42	A
	ATOM	1009	CB	LEU	A	193	42.884	16.712	22.600	1.00	12.88	A
	ATOM	1010	CG	LEU	A	193	42.445	17.721	21.525	1.00	15.97	A
55	ATOM	1011	CD1	LEU	A	193	41.869	18.979	22.190	1.00	13.97	A
	ATOM	1012	CD2	LEU	A	193	43.642	18.088	20.655	1.00	14.58	A
	ATOM	1013	C	LEU	A	193	44.211	14.659	23.174	1.00	14.49	A
	ATOM	1014	O	LEU	A	193	45.427	14.813	23.310	1.00	16.56	A
	ATOM	1015	N	GLU	A	194	43.500	13.870	23.975	1.00	13.96	A

	ATOM	1016	CA	GLU	A	194	44.179	13.123	25.032	1.00	14.08	A
	ATOM	1017	CB	GLU	A	194	43.190	12.295	25.857	1.00	14.65	A
	ATOM	1018	CG	GLU	A	194	43.882	11.301	26.789	1.00	17.09	A
	ATOM	1019	CD	GLU	A	194	42.924	10.592	27.730	1.00	19.59	A
	ATOM	1020	OE1	GLU	A	194	41.809	10.237	27.295	1.00	19.25	A
	ATOM	1021	OE2	GLU	A	194	43.302	10.380	28.906	1.00	20.20	A
	ATOM	1022	C	GLU	A	194	45.208	12.199	24.386	1.00	13.57	A
	ATOM	1023	O	GLU	A	194	46.337	12.093	24.847	1.00	14.23	A
	ATOM	1024	N	TYR	A	195	44.822	11.544	23.301	1.00	14.89	A
	ATOM	1025	CA	TYR	A	195	45.743	10.642	22.618	1.00	16.58	A
	ATOM	1026	CB	TYR	A	195	45.030	9.910	21.488	1.00	17.29	A
	ATOM	1027	CG	TYR	A	195	45.956	9.058	20.649	1.00	17.92	A
	ATOM	1028	CD1	TYR	A	195	46.347	7.788	21.077	1.00	17.96	A
	ATOM	1029	CE1	TYR	A	195	47.203	6.996	20.304	1.00	19.77	A
	ATOM	1030	CD2	TYR	A	195	46.445	9.524	19.428	1.00	16.67	A
	ATOM	1031	CE2	TYR	A	195	47.299	8.744	18.650	1.00	18.51	A
	ATOM	1032	CZ	TYR	A	195	47.671	7.481	19.094	1.00	20.24	A
	ATOM	1033	OH	TYR	A	195	48.506	6.705	18.325	1.00	21.89	A
	ATOM	1034	C	TYR	A	195	46.917	11.419	22.035	1.00	16.98	A
	ATOM	1035	O	TYR	A	195	48.081	11.047	22.203	1.00	14.61	A
	ATOM	1036	N	LEU	A	196	46.599	12.507	21.347	1.00	16.30	A
	ATOM	1037	CA	LEU	A	196	47.619	13.328	20.720	1.00	18.15	A
	ATOM	1038	CB	LEU	A	196	46.969	14.502	19.982	1.00	18.59	A
	ATOM	1039	CG	LEU	A	196	47.834	15.203	18.935	1.00	22.51	A
	ATOM	1040	CD1	LEU	A	196	48.222	14.206	17.841	1.00	20.94	A
	ATOM	1041	CD2	LEU	A	196	47.060	16.375	18.338	1.00	22.98	A
	ATOM	1042	C	LEU	A	196	48.592	13.844	21.763	1.00	17.75	A
	ATOM	1043	O	LEU	A	196	49.801	13.644	21.649	1.00	18.33	A
	ATOM	1044	N	HIS	A	197	48.064	14.495	22.792	1.00	17.12	A
	ATOM	1045	CA	HIS	A	197	48.913	15.042	23.842	1.00	18.47	A
	ATOM	1046	CB	HIS	A	197	48.069	15.866	24.817	1.00	15.90	A
	ATOM	1047	CG	HIS	A	197	47.571	17.152	24.231	1.00	19.15	A
	ATOM	1048	CD2	HIS	A	197	47.830	17.745	23.038	1.00	18.22	A
	ATOM	1049	ND1	HIS	A	197	46.704	17.992	24.897	1.00	17.47	A
	ATOM	1050	CE1	HIS	A	197	46.450	19.047	24.139	1.00	19.74	A
	ATOM	1051	NE2	HIS	A	197	47.119	18.921	23.007	1.00	15.69	A
	ATOM	1052	C	HIS	A	197	49.696	13.958	24.572	1.00	19.40	A
	ATOM	1053	O	HIS	A	197	50.823	14.192	25.021	1.00	19.42	A
	ATOM	1054	N	GLY	A	198	49.106	12.770	24.679	1.00	18.59	A
	ATOM	1055	CA	GLY	A	198	49.793	11.675	25.339	1.00	19.60	A
	ATOM	1056	C	GLY	A	198	51.075	11.307	24.612	1.00	21.86	A
	ATOM	1057	O	GLY	A	198	51.963	10.682	25.186	1.00	23.09	A
	ATOM	1058	N	LYS	A	199	51.174	11.687	23.341	1.00	22.81	A
	ATOM	1059	CA	LYS	A	199	52.368	11.401	22.549	1.00	24.43	A
	ATOM	1060	CB	LYS	A	199	51.990	10.905	21.154	1.00	26.00	A
	ATOM	1061	CG	LYS	A	199	51.378	9.520	21.133	1.00	30.98	A
	ATOM	1062	CD	LYS	A	199	51.291	9.002	19.708	1.00	36.85	A
	ATOM	1063	CE	LYS	A	199	50.832	7.559	19.682	1.00	40.37	A
	ATOM	1064	NZ	LYS	A	199	51.646	6.691	20.581	1.00	43.48	A
	ATOM	1065	C	LYS	A	199	53.253	12.631	22.414	1.00	23.88	A
	ATOM	1066	O	LYS	A	199	54.144	12.669	21.568	1.00	24.97	A
	ATOM	1067	N	GLY	A	200	52.997	13.638	23.243	1.00	24.00	A
	ATOM	1068	CA	GLY	A	200	53.790	14.853	23.203	1.00	22.12	A
	ATOM	1069	C	GLY	A	200	53.665	15.632	21.907	1.00	22.14	A
	ATOM	1070	O	GLY	A	200	54.632	16.231	21.439	1.00	22.41	A
	ATOM	1071	N	ILE	A	201	52.475	15.630	21.320	1.00	20.00	A
	ATOM	1072	CA	ILE	A	201	52.252	16.355	20.080	1.00	18.93	A
	ATOM	1073	CB	ILE	A	201	51.784	15.414	18.955	1.00	19.70	A
	ATOM	1074	CG2	ILE	A	201	51.414	16.226	17.716	1.00	20.12	A

	ATOM	1075	CG1	ILE	A	201	52.880	14.395	18.636	1.00	20.03	A
	ATOM	1076	CD1	ILE	A	201	52.408	13.258	17.745	1.00	22.75	A
	ATOM	1077	C	ILE	A	201	51.193	17.425	20.270	1.00	19.87	A
	ATOM	1078	O	ILE	A	201	50.121	17.161	20.817	1.00	20.08	A
5	ATOM	1079	N	ILE	A	202	51.508	18.633	19.815	1.00	19.94	A
	ATOM	1080	CA	ILE	A	202	50.601	19.772	19.891	1.00	20.45	A
	ATOM	1081	CB	ILE	A	202	51.352	21.040	20.356	1.00	22.21	A
	ATOM	1082	CG2	ILE	A	202	50.381	22.220	20.470	1.00	22.67	A
	ATOM	1083	CG1	ILE	A	202	52.033	20.775	21.700	1.00	24.19	A
10	ATOM	1084	CD1	ILE	A	202	52.914	21.920	22.169	1.00	25.39	A
	ATOM	1085	C	ILE	A	202	50.105	19.999	18.464	1.00	20.71	A
	ATOM	1086	O	ILE	A	202	50.910	20.067	17.538	1.00	19.48	A
	ATOM	1087	N	HIS	A	203	48.795	20.108	18.270	1.00	18.65	A
	ATOM	1088	CA	HIS	A	203	48.280	20.319	16.919	1.00	18.02	A
15	ATOM	1089	CB	HIS	A	203	46.775	20.057	16.874	1.00	16.31	A
	ATOM	1090	CG	HIS	A	203	46.199	20.136	15.495	1.00	18.36	A
	ATOM	1091	CD2	HIS	A	203	46.043	21.186	14.655	1.00	16.42	A
	ATOM	1092	ND1	HIS	A	203	45.759	19.026	14.806	1.00	19.50	A
	ATOM	1093	CE1	HIS	A	203	45.359	19.389	13.600	1.00	17.64	A
20	ATOM	1094	NE2	HIS	A	203	45.522	20.694	13.483	1.00	20.87	A
	ATOM	1095	C	HIS	A	203	48.589	21.738	16.405	1.00	18.92	A
	ATOM	1096	O	HIS	A	203	49.073	21.906	15.282	1.00	16.21	A
	ATOM	1097	N	ARG	A	204	48.301	22.744	17.232	1.00	18.60	A
	ATOM	1098	CA	ARG	A	204	48.552	24.157	16.914	1.00	19.81	A
25	ATOM	1099	CB	ARG	A	204	49.998	24.365	16.458	1.00	21.61	A
	ATOM	1100	CG	ARG	A	204	51.024	24.137	17.550	1.00	23.82	A
	ATOM	1101	CD	ARG	A	204	52.323	24.870	17.252	1.00	27.62	A
	ATOM	1102	NE	ARG	A	204	52.932	24.449	15.994	1.00	29.43	A
	ATOM	1103	CZ	ARG	A	204	54.125	24.861	15.572	1.00	33.10	A
30	ATOM	1104	NH1	ARG	A	204	54.835	25.706	16.311	1.00	32.12	A
	ATOM	1105	NH2	ARG	A	204	54.614	24.426	14.418	1.00	30.25	A
	ATOM	1106	C	ARG	A	204	47.624	24.830	15.905	1.00	20.03	A
	ATOM	1107	O	ARG	A	204	47.711	26.038	15.698	1.00	20.88	A
	ATOM	1108	N	ASP	A	205	46.755	24.071	15.255	1.00	18.96	A
35	ATOM	1109	CA	ASP	A	205	45.828	24.692	14.325	1.00	17.90	A
	ATOM	1110	CB	ASP	A	205	46.418	24.741	12.914	1.00	18.95	A
	ATOM	1111	CG	ASP	A	205	45.655	25.688	12.008	1.00	20.36	A
	ATOM	1112	OD1	ASP	A	205	44.939	26.560	12.545	1.00	20.35	A
	ATOM	1113	OD2	ASP	A	205	45.772	25.573	10.771	1.00	22.49	A
40	ATOM	1114	C	ASP	A	205	44.500	23.956	14.328	1.00	19.60	A
	ATOM	1115	O	ASP	A	205	43.876	23.751	13.287	1.00	21.53	A
	ATOM	1116	N	LEU	A	206	44.063	23.569	15.521	1.00	18.53	A
	ATOM	1117	CA	LEU	A	206	42.813	22.851	15.667	1.00	19.18	A
	ATOM	1118	CB	LEU	A	206	42.693	22.295	17.087	1.00	18.94	A
45	ATOM	1119	CG	LEU	A	206	41.511	21.358	17.346	1.00	23.10	A
	ATOM	1120	CD1	LEU	A	206	41.615	20.142	16.436	1.00	23.01	A
	ATOM	1121	CD2	LEU	A	206	41.504	20.933	18.808	1.00	22.97	A
	ATOM	1122	C	LEU	A	206	41.639	23.772	15.361	1.00	19.05	A
	ATOM	1123	O	LEU	A	206	41.556	24.880	15.886	1.00	19.25	A
50	ATOM	1124	N	LYS	A	207	40.740	23.307	14.500	1.00	17.54	A
	ATOM	1125	CA	LYS	A	207	39.564	24.081	14.110	1.00	18.60	A
	ATOM	1126	CB	LYS	A	207	39.980	25.248	13.196	1.00	18.98	A
	ATOM	1127	CG	LYS	A	207	40.786	24.817	11.982	1.00	18.20	A
	ATOM	1128	CD	LYS	A	207	41.246	26.000	11.139	1.00	21.42	A
55	ATOM	1129	CE	LYS	A	207	42.223	25.537	10.062	1.00	23.21	A
	ATOM	1130	NZ	LYS	A	207	42.561	26.604	9.084	1.00	29.61	A
	ATOM	1131	C	LYS	A	207	38.566	23.181	13.388	1.00	18.18	A
	ATOM	1132	O	LYS	A	207	38.921	22.100	12.915	1.00	18.11	A
	ATOM	1133	N	PRO	A	208	37.298	23.614	13.293	1.00	20.26	A

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ATOM   1134  CD  PRO A 208      36.713  24.833  13.882  1.00 18.79      A
ATOM   1135  CA  PRO A 208      36.272  22.814  12.616  1.00 19.67      A
ATOM   1136  CB  PRO A 208      35.063  23.742  12.608  1.00 19.45      A
ATOM   1137  CG  PRO A 208      35.231  24.509  13.891  1.00 21.81      A
ATOM   1138  C   PRO A 208      36.674  22.372  11.209  1.00 21.04      A
ATOM   1139  O   PRO A 208      36.264  21.307  10.751  1.00 21.19      A
ATOM   1140  N   GLU A 209      37.474  23.188  10.528  1.00 21.69      A
ATOM   1141  CA  GLU A 209      37.928  22.872   9.170  1.00 22.64      A
ATOM   1142  CB  GLU   209      38.644  24.084   8.558  0.50 23.65      AC1
ATOM   1143  CG  GLU   209      39.253  23.825   7.185  0.50 27.24      AC1
ATOM   1144  CD  GLU   209      40.155  24.958   6.716  0.50 29.40      AC1
ATOM   1145  OE1 GLU   209      39.660  26.094   6.553  0.50 29.68      AC1
ATOM   1146  OE2 GLU   209      41.363  24.711   6.511  0.50 30.07      AC1
ATOM   1147  C   GLU A 209      38.879  21.668   9.159  1.00 22.28      A
ATOM   1148  O   GLU A 209      38.955  20.933   8.170  1.00 21.36      A
ATOM   1149  N   ASN A 210      39.600  21.490  10.263  1.00 19.90      A
ATOM   1150  CA  ASN A 210      40.574  20.412  10.436  1.00 19.44      A
ATOM   1151  CB  ASN A 210      41.744  20.912  11.287  1.00 20.07      A
ATOM   1152  CG  ASN A 210      42.746  21.698  10.479  1.00 25.77      A
ATOM   1153  OD1 ASN A 210      43.571  22.427  11.029  1.00 26.73      A
ATOM   1154  ND2 ASN A 210      42.687  21.548   9.158  1.00 25.15      A
ATOM   1155  C   ASN A 210      40.005  19.151  11.078  1.00 18.63      A
ATOM   1156  O   ASN A 210      40.712  18.154  11.234  1.00 18.29      A
ATOM   1157  N   ILE A 211      38.739  19.202  11.469  1.00 16.31      A
ATOM   1158  CA  ILE A 211      38.090  18.058  12.085  1.00 15.49      A
ATOM   1159  CB  ILE A 211      37.336  18.488  13.354  1.00 15.40      A
ATOM   1160  CG2 ILE A 211      36.582  17.311  13.950  1.00 14.59      A
ATOM   1161  CG1 ILE A 211      38.342  19.046  14.365  1.00 15.91      A
ATOM   1162  CD1 ILE A 211      37.720  19.669  15.590  1.00 15.98      A
ATOM   1163  C   ILE A 211      37.131  17.485  11.059  1.00 17.26      A
ATOM   1164  O   ILE A 211      35.995  17.947  10.926  1.00 18.16      A
ATOM   1165  N   LEU A 212      37.599  16.486  10.317  1.00 15.97      A
ATOM   1166  CA  LEU A 212      36.784  15.875   9.274  1.00 17.08      A
ATOM   1167  CB  LEU A 212      37.685  15.249   8.202  1.00 17.78      A
ATOM   1168  CG  LEU A 212      38.785  16.157   7.640  1.00 18.92      A
ATOM   1169  CD1 LEU A 212      39.476  15.450   6.485  1.00 22.09      A
ATOM   1170  CD2 LEU A 212      38.188  17.482   7.166  1.00 19.91      A
ATOM   1171  C   LEU A 212      35.843  14.825   9.837  1.00 18.35      A
ATOM   1172  O   LEU A 212      35.957  14.433  11.002  1.00 19.39      A
ATOM   1173  N   LEU A 213      34.915  14.368   9.000  1.00 17.84      A
ATOM   1174  CA  LEU A 213      33.942  13.362   9.403  1.00 19.94      A
ATOM   1175  CB  LEU A 213      32.556  14.004   9.487  1.00 20.84      A
ATOM   1176  CG  LEU A 213      32.396  15.059  10.583  1.00 20.31      A
ATOM   1177  CD1 LEU A 213      31.124  15.837  10.367  1.00 22.75      A
ATOM   1178  CD2 LEU A 213      32.379  14.378  11.940  1.00 23.93      A
ATOM   1179  C   LEU A 213      33.914  12.187   8.426  1.00 20.98      A
ATOM   1180  O   LEU A 213      33.743  12.379   7.218  1.00 19.55      A
ATOM   1181  N   ASN A 214      34.088  10.970   8.935  1.00 20.44      A
ATOM   1182  CA  ASN A 214      34.055   9.814   8.049  1.00 23.77      A
ATOM   1183  CB  ASN A 214      34.745   8.596   8.674  1.00 25.30      A
ATOM   1184  CG  ASN A 214      34.077   8.127   9.948  1.00 32.04      A
ATOM   1185  OD1 ASN A 214      32.908   8.422  10.206  1.00 34.43      A
ATOM   1186  ND2 ASN A 214      34.818   7.369  10.752  1.00 33.85      A
ATOM   1187  C   ASN A 214      32.618   9.466   7.693  1.00 24.07      A
ATOM   1188  O   ASN A 214      31.672  10.113   8.150  1.00 19.94      A
ATOM   1189  N   GLU A 215      32.459   8.433   6.879  1.00 25.77      A
ATOM   1190  CA  GLU A 215      31.138   8.003   6.445  1.00 28.69      A
ATOM   1191  CB  GLU A 215      31.275   6.796   5.513  1.00 31.98      A
ATOM   1192  CG  GLU A 215      29.970   6.334   4.896  1.00 40.22      A
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	ATOM	1193	CD	GLU	A	215	30.182	5.312	3.795	1.00	44.27	A
	ATOM	1194	OE1	GLU	A	215	30.817	4.268	4.065	1.00	46.46	A
	ATOM	1195	OE2	GLU	A	215	29.716	5.556	2.660	1.00	46.13	A
	ATOM	1196	C	GLU	A	215	30.188	7.673	7.601	1.00	28.41	A
5	ATOM	1197	O	GLU	A	215	28.971	7.769	7.447	1.00	28.52	A
	ATOM	1198	N	ASP	A	216	30.737	7.287	8.752	1.00	26.77	A
	ATOM	1199	CA	ASP	A	216	29.914	6.953	9.917	1.00	27.28	A
	ATOM	1200	CB	ASP	A	216	30.538	5.795	10.696	1.00	31.27	A
	ATOM	1201	CG	ASP	A	216	30.390	4.466	9.979	1.00	37.61	A
10	ATOM	1202	OD1	ASP	A	216	29.274	4.170	9.499	1.00	39.45	A
	ATOM	1203	OD2	ASP	A	216	31.382	3.710	9.902	1.00	41.84	A
	ATOM	1204	C	ASP	A	216	29.697	8.135	10.862	1.00	26.37	A
	ATOM	1205	O	ASP	A	216	29.136	7.984	11.950	1.00	25.73	A
	ATOM	1206	N	MET	A	217	30.156	9.306	10.441	1.00	23.02	A
15	ATOM	1207	CA	MET	A	217	30.015	10.527	11.218	1.00	21.83	A
	ATOM	1208	CB	MET	A	217	28.537	10.789	11.517	1.00	23.24	A
	ATOM	1209	CG	MET	A	217	27.742	11.186	10.274	1.00	22.98	A
	ATOM	1210	SD	MET	A	217	28.464	12.616	9.430	1.00	27.57	A
	ATOM	1211	CE	MET	A	217	27.679	13.974	10.332	1.00	26.68	A
20	ATOM	1212	C	MET	A	217	30.844	10.618	12.502	1.00	21.51	A
	ATOM	1213	O	MET	A	217	30.474	11.323	13.440	1.00	18.62	A
	ATOM	1214	N	HIS	A	218	31.957	9.892	12.544	1.00	20.10	A
	ATOM	1215	CA	HIS	A	218	32.873	9.964	13.678	1.00	19.86	A
	ATOM	1216	CB	HIS	A	218	33.482	8.594	13.977	1.00	20.21	A
25	ATOM	1217	CG	HIS	A	218	32.551	7.667	14.698	1.00	22.40	A
	ATOM	1218	CD2	HIS	A	218	31.910	6.547	14.287	1.00	21.27	A
	ATOM	1219	ND1	HIS	A	218	32.177	7.863	16.011	1.00	19.59	A
	ATOM	1220	CE1	HIS	A	218	31.348	6.902	16.379	1.00	21.88	A
	ATOM	1221	NE2	HIS	A	218	31.168	6.091	15.351	1.00	22.08	A
30	ATOM	1222	C	HIS	A	218	33.947	10.921	13.172	1.00	19.10	A
	ATOM	1223	O	HIS	A	218	34.170	11.004	11.965	1.00	20.31	A
	ATOM	1224	N	ILE	A	219	34.617	11.638	14.067	1.00	17.21	A
	ATOM	1225	CA	ILE	A	219	35.628	12.586	13.618	1.00	15.26	A
	ATOM	1226	CB	ILE	A	219	35.987	13.614	14.716	1.00	15.38	A
35	ATOM	1227	CG2	ILE	A	219	34.722	14.305	15.221	1.00	14.58	A
	ATOM	1228	CG1	ILE	A	219	36.734	12.919	15.864	1.00	14.46	A
	ATOM	1229	CD1	ILE	A	219	37.279	13.885	16.911	1.00	13.74	A
	ATOM	1230	C	ILE	A	219	36.929	11.944	13.161	1.00	16.21	A
	ATOM	1231	O	ILE	A	219	37.238	10.799	13.500	1.00	15.88	A
40	ATOM	1232	N	GLN	A	220	37.677	12.711	12.378	1.00	15.62	A
	ATOM	1233	CA	GLN	A	220	38.980	12.316	11.876	1.00	17.84	A
	ATOM	1234	CB	GLN	A	220	38.872	11.595	10.525	1.00	20.00	A
	ATOM	1235	CG	GLN	A	220	38.463	10.129	10.659	1.00	26.97	A
	ATOM	1236	CD	GLN	A	220	38.648	9.343	9.372	1.00	29.95	A
45	ATOM	1237	OE1	GLN	A	220	37.968	9.590	8.373	1.00	33.12	A
	ATOM	1238	NE2	GLN	A	220	39.578	8.393	9.389	1.00	30.47	A
	ATOM	1239	C	GLN	A	220	39.757	13.610	11.735	1.00	17.00	A
	ATOM	1240	O	GLN	A	220	39.609	14.339	10.751	1.00	18.27	A
	ATOM	1241	N	ILE	A	221	40.566	13.906	12.746	1.00	14.34	A
50	ATOM	1242	CA	ILE	A	221	41.361	15.120	12.753	1.00	14.46	A
	ATOM	1243	CB	ILE	A	221	41.867	15.416	14.175	1.00	12.30	A
	ATOM	1244	CG2	ILE	A	221	42.764	16.656	14.167	1.00	14.78	A
	ATOM	1245	CG1	ILE	A	221	40.660	15.613	15.102	1.00	13.92	A
	ATOM	1246	CD1	ILE	A	221	41.003	15.901	16.543	1.00	15.06	A
55	ATOM	1247	C	ILE	A	221	42.536	14.996	11.783	1.00	15.44	A
	ATOM	1248	O	ILE	A	221	43.106	13.915	11.613	1.00	13.93	A
	ATOM	1249	N	THR	A	222	42.877	16.101	11.127	1.00	15.36	A
	ATOM	1250	CA	THR	A	222	43.980	16.098	10.174	1.00	17.52	A
	ATOM	1251	CB	THR	A	222	43.470	15.836	8.750	1.00	19.92	A

	ATOM	1252	OG1	THR	A	222	44.587	15.637	7.875	1.00	18.78	A
	ATOM	1253	CG2	THR	A	222	42.630	17.018	8.257	1.00	18.16	A
	ATOM	1254	C	THR	A	222	44.735	17.428	10.192	1.00	19.60	A
	ATOM	1255	O	THR	A	222	44.509	18.257	11.084	1.00	18.59	A
5	ATOM	1256	N	ASP	A	223	45.630	17.610	9.216	1.00	18.69	A
	ATOM	1257	CA	ASP	A	223	46.440	18.825	9.069	1.00	20.12	A
	ATOM	1258	CB	ASP	A	223	45.532	20.065	9.108	1.00	23.51	A
	ATOM	1259	CG	ASP	A	223	46.248	21.335	8.670	1.00	27.09	A
	ATOM	1260	OD1	ASP	A	223	47.283	21.227	7.975	1.00	26.28	A
10	ATOM	1261	OD2	ASP	A	223	45.765	22.438	9.009	1.00	26.15	A
	ATOM	1262	C	ASP	A	223	47.516	18.913	10.150	1.00	21.73	A
	ATOM	1263	O	ASP	A	223	47.439	19.751	11.055	1.00	22.76	A
	ATOM	1264	N	PHE	A	224	48.535	18.063	10.027	1.00	20.75	A
	ATOM	1265	CA	PHE	A	224	49.611	17.988	11.009	1.00	20.11	A
15	ATOM	1266	CB	PHE	A	224	49.805	16.527	11.424	1.00	20.62	A
	ATOM	1267	CG	PHE	A	224	48.682	15.991	12.263	1.00	21.41	A
	ATOM	1268	CD1	PHE	A	224	48.598	16.312	13.614	1.00	23.05	A
	ATOM	1269	CD2	PHE	A	224	47.681	15.212	11.693	1.00	22.27	A
	ATOM	1270	CE1	PHE	A	224	47.528	15.868	14.389	1.00	23.30	A
20	ATOM	1271	CE2	PHE	A	224	46.606	14.763	12.457	1.00	21.11	A
	ATOM	1272	CZ	PHE	A	224	46.530	15.093	13.807	1.00	22.02	A
	ATOM	1273	C	PHE	A	224	50.957	18.583	10.619	1.00	20.45	A
	ATOM	1274	O	PHE	A	224	51.905	18.547	11.407	1.00	20.73	A
	ATOM	1275	N	GLY	A	225	51.049	19.125	9.412	1.00	22.02	A
25	ATOM	1276	CA	GLY	A	225	52.301	19.713	8.981	1.00	22.66	A
	ATOM	1277	C	GLY	A	225	52.742	20.822	9.920	1.00	24.99	A
	ATOM	1278	O	GLY	A	225	53.939	21.041	10.122	1.00	24.52	A
	ATOM	1279	N	THR	A	226	51.779	21.524	10.508	1.00	23.50	A
	ATOM	1280	CA	THR	A	226	52.106	22.613	11.416	1.00	25.16	A
30	ATOM	1281	CB	THR	A	226	51.199	23.829	11.160	1.00	24.76	A
	ATOM	1282	OG1	THR	A	226	49.831	23.410	11.113	1.00	22.68	A
	ATOM	1283	CG2	THR	A	226	51.571	24.490	9.834	1.00	25.00	A
	ATOM	1284	C	THR	A	226	52.046	22.233	12.894	1.00	25.79	A
	ATOM	1285	O	THR	A	226	52.019	23.100	13.768	1.00	24.54	A
35	ATOM	1286	N	ALA	A	227	52.037	20.935	13.173	1.00	24.97	A
	ATOM	1287	CA	ALA	A	227	52.004	20.475	14.550	1.00	25.49	A
	ATOM	1288	CB	ALA	A	227	51.659	18.993	14.607	1.00	22.85	A
	ATOM	1289	C	ALA	A	227	53.384	20.715	15.149	1.00	27.70	A
	ATOM	1290	O	ALA	A	227	54.331	21.047	14.435	1.00	26.60	A
40	ATOM	1291	N	LYS	A	228	53.491	20.558	16.461	1.00	28.53	A
	ATOM	1292	CA	LYS	A	228	54.760	20.745	17.149	1.00	32.12	A
	ATOM	1293	CB	LYS	A	228	54.699	21.974	18.054	1.00	33.81	A
	ATOM	1294	CG	LYS	A	228	56.007	22.294	18.765	1.00	41.23	A
	ATOM	1295	CD	LYS	A	228	57.082	22.725	17.768	1.00	47.57	A
45	ATOM	1296	CE	LYS	A	228	58.401	23.056	18.462	1.00	49.82	A
	ATOM	1297	NZ	LYS	A	228	59.459	23.425	17.480	1.00	51.49	A
	ATOM	1298	C	LYS	A	228	55.019	19.504	17.985	1.00	33.25	A
	ATOM	1299	O	LYS	A	228	54.190	19.129	18.815	1.00	33.70	A
	ATOM	1300	N	VAL	A	229	56.159	18.860	17.756	1.00	33.64	A
50	ATOM	1301	CA	VAL	A	229	56.516	17.661	18.501	1.00	34.66	A
	ATOM	1302	CB	VAL	A	229	57.248	16.646	17.609	1.00	33.50	A
	ATOM	1303	CG1	VAL	A	229	57.619	15.419	18.415	1.00	32.34	A
	ATOM	1304	CG2	VAL	A	229	56.370	16.264	16.436	1.00	34.25	A
	ATOM	1305	C	VAL	A	229	57.420	18.035	19.668	1.00	37.57	A
55	ATOM	1306	O	VAL	A	229	58.581	18.392	19.474	1.00	35.91	A
	ATOM	1307	N	LEU	A	230	56.877	17.948	20.878	1.00	40.57	A
	ATOM	1308	CA	LEU	A	230	57.615	18.289	22.088	1.00	46.10	A
	ATOM	1309	CB	LEU	A	230	56.654	18.417	23.270	1.00	44.71	A
	ATOM	1310	CG	LEU	A	230	55.627	19.545	23.207	1.00	44.50	A

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ATOM   1311  CD1 LEU A 230      54.673  19.430  24.383  1.00 44.39      A
ATOM   1312  CD2 LEU A 230      56.340  20.885  23.214  1.00 44.81      A
ATOM   1313  C   LEU A 230      58.695  17.279  22.440  1.00 50.42      A
ATOM   1314  O   LEU A 230      58.603  16.104  22.089  1.00 51.64      A
ATOM   1315  N   SER A 231      59.717  17.756  23.145  1.00 55.81      A
ATOM   1316  CA  SER A 231      60.824  16.914  23.583  1.00 61.14      A
ATOM   1317  CB  SER A 231      62.077  17.200  22.750  1.00 61.27      A
ATOM   1318  OG  SER A 231      62.444  18.568  22.823  1.00 62.85      A
ATOM   1319  C   SER A 231      61.124  17.126  25.071  1.00 64.65      A
ATOM   1320  O   SER A 231      61.392  16.164  25.794  1.00 65.70      A
ATOM   1321  N   PRO A 232      61.081  18.387  25.549  1.00 67.54      A
ATOM   1322  CD  PRO A 232      60.854  19.651  24.823  1.00 68.60      A
ATOM   1323  CA  PRO A 232      61.358  18.655  26.966  1.00 68.74      A
ATOM   1324  CB  PRO A 232      61.109  20.158  27.086  1.00 68.83      A
ATOM   1325  CG  PRO A 232      61.505  20.666  25.737  1.00 68.96      A
ATOM   1326  C   PRO A 232      60.460  17.846  27.899  1.00 69.17      A
ATOM   1327  O   PRO A 232      59.335  17.494  27.541  1.00 69.94      A
ATOM   1328  N   ALA A 237      57.424  23.198  27.637  1.00 80.06      A
ATOM   1329  CA  ALA A 237      56.783  23.047  26.335  1.00 79.29      A
ATOM   1330  CB  ALA A 237      55.275  22.907  26.512  1.00 78.64      A
ATOM   1331  C   ALA A 237      57.092  24.239  25.433  1.00 79.07      A
ATOM   1332  O   ALA A 237      56.250  25.113  25.249  1.00 79.47      A
ATOM   1333  N   ALA A 238      58.297  24.280  24.871  1.00 78.57      A
ATOM   1334  CA  ALA A 238      58.683  25.383  23.992  1.00 78.50      A
ATOM   1335  CB  ALA A 238      60.186  25.347  23.728  1.00 78.50      A
ATOM   1336  C   ALA A 238      57.920  25.327  22.673  1.00 78.15      A
ATOM   1337  O   ALA A 238      57.243  24.341  22.375  1.00 77.96      A
ATOM   1338  N   ALA A 239      58.027  26.393  21.887  1.00 77.28      A
ATOM   1339  CA  ALA A 239      57.338  26.452  20.603  1.00 76.27      A
ATOM   1340  CB  ALA A 239      55.849  26.489  20.827  1.00 76.61      A
ATOM   1341  C   ALA A 239      57.766  27.667  19.793  1.00 75.38      A
ATOM   1342  O   ALA A 239      58.955  27.955  19.700  1.00 75.89      A
ATOM   1343  N   ASN A 240      56.781  28.357  19.214  1.00 73.95      A
ATOM   1344  CA  ASN A 240      56.967  29.553  18.389  1.00 71.07      A
ATOM   1345  CB  ASN A 240      58.151  30.400  18.874  1.00 71.47      A
ATOM   1346  CG  ASN A 240      59.459  30.055  18.174  1.00 72.06      A
ATOM   1347  OD1 ASN A 240      59.575  30.149  16.943  1.00 72.03      A
ATOM   1348  ND2 ASN A 240      60.470  29.665  18.964  1.00 71.91      A
ATOM   1349  C   ASN A 240      57.188  29.178  16.928  1.00 69.41      A
ATOM   1350  O   ASN A 240      57.480  28.024  16.624  1.00 70.09      A
ATOM   1351  N   ALA A 241      57.055  30.165  16.038  1.00 66.62      A
ATOM   1352  CA  ALA A 241      57.246  30.013  14.585  1.00 63.94      A
ATOM   1353  C   ALA A 241      55.952  30.080  13.772  1.00 60.63      A
ATOM   1354  O   ALA A 241      55.840  30.880  12.845  1.00 61.29      A
ATOM   1355  CB  ALA A 241      57.979  28.704  14.246  1.00 65.23      A
ATOM   1356  N   PHE A 242      54.984  29.236  14.113  1.00 56.72      A
ATOM   1357  CA  PHE A 242      53.712  29.196  13.394  1.00 52.53      A
ATOM   1358  CB  PHE A 242      53.419  27.767  12.923  1.00 49.14      A
ATOM   1359  CG  PHE A 242      52.040  27.590  12.354  1.00 47.38      A
ATOM   1360  CD1 PHE A 242      51.731  28.067  11.085  1.00 47.69      A
ATOM   1361  CD2 PHE A 242      51.038  26.975  13.102  1.00 45.45      A
ATOM   1362  CE1 PHE A 242      50.445  27.937  10.565  1.00 46.75      A
ATOM   1363  CE2 PHE A 242      49.751  26.840  12.594  1.00 45.41      A
ATOM   1364  CZ  PHE A 242      49.453  27.323  11.322  1.00 46.55      A
ATOM   1365  C   PHE A 242      52.534  29.688  14.229  1.00 50.08      A
ATOM   1366  O   PHE A 242      52.502  29.505  15.444  1.00 49.86      A
ATOM   1367  N   VAL A 243      51.566  30.305  13.557  1.00 47.67      A
ATOM   1368  CA  VAL A 243      50.355  30.809  14.200  1.00 46.21      A
ATOM   1369  CB  VAL A 243      50.340  32.352  14.258  1.00 47.36      A
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	ATOM	1370	CG1	VAL	A	243	49.012	32.844	14.825	1.00 47.54	A
	ATOM	1371	CG2	VAL	A	243	51.497	32.842	15.109	1.00 48.50	A
	ATOM	1372	C	VAL	A	243	49.150	30.342	13.389	1.00 44.12	A
	ATOM	1373	O	VAL	A	243	48.956	30.765	12.247	1.00 44.46	A
5	ATOM	1374	N	GLY	A	244	48.348	29.467	13.985	1.00 40.48	A
	ATOM	1375	CA	GLY	A	244	47.176	28.941	13.306	1.00 37.65	A
	ATOM	1376	C	GLY	A	244	46.101	29.960	12.964	1.00 35.39	A
	ATOM	1377	O	GLY	A	244	46.313	31.168	13.065	1.00 35.92	A
	ATOM	1378	N	THR	A	245	44.936	29.463	12.560	1.00 33.30	A
10	ATOM	1379	CA	THR	A	245	43.813	30.312	12.184	1.00 30.20	A
	ATOM	1380	CB	THR	A	245	42.593	29.450	11.829	1.00 32.00	A
	ATOM	1381	OG1	THR	A	245	42.952	28.573	10.755	1.00 32.81	A
	ATOM	1382	CG2	THR	A	245	41.419	30.319	11.390	1.00 28.34	A
	ATOM	1383	C	THR	A	245	43.476	31.296	13.296	1.00 27.96	A
15	ATOM	1384	O	THR	A	245	43.212	30.907	14.434	1.00 25.46	A
	ATOM	1385	N	ALA	A	246	43.486	32.576	12.938	1.00 25.22	A
	ATOM	1386	CA	ALA	A	246	43.247	33.675	13.867	1.00 23.27	A
	ATOM	1387	CB	ALA	A	246	42.956	34.955	13.082	1.00 22.94	A
	ATOM	1388	C	ALA	A	246	42.178	33.475	14.934	1.00 21.27	A
20	ATOM	1389	O	ALA	A	246	42.431	33.705	16.114	1.00 20.93	A
	ATOM	1390	N	GLN	A	247	40.988	33.047	14.536	1.00 19.67	A
	ATOM	1391	CA	GLN	A	247	39.911	32.886	15.504	1.00 20.17	A
	ATOM	1392	CB	GLN		247	38.608	32.535	14.779	0.50 21.89	AC1
	ATOM	1393	CG	GLN		247	38.522	33.076	13.355	0.50 26.18	AC1
25	ATOM	1394	CD	GLN		247	37.220	33.794	13.064	0.50 27.30	AC1
	ATOM	1395	OE1	GLN		247	36.172	33.447	13.605	0.50 30.13	AC1
	ATOM	1396	NE2	GLN		247	37.278	34.792	12.189	0.50 28.70	AC1
	ATOM	1397	C	GLN	A	247	40.181	31.849	16.595	1.00 19.43	A
	ATOM	1398	O	GLN	A	247	39.546	31.883	17.648	1.00 18.93	A
30	ATOM	1399	N	TYR	A	248	41.132	30.948	16.359	1.00 18.60	A
	ATOM	1400	CA	TYR	A	248	41.441	29.896	17.329	1.00 19.20	A
	ATOM	1401	CB	TYR	A	248	41.333	28.529	16.642	1.00 17.53	A
	ATOM	1402	CG	TYR	A	248	40.013	28.362	15.927	1.00 19.32	A
	ATOM	1403	CD1	TYR	A	248	38.859	28.010	16.625	1.00 17.69	A
35	ATOM	1404	CE1	TYR	A	248	37.617	27.976	15.990	1.00 18.18	A
	ATOM	1405	CD2	TYR	A	248	39.897	28.664	14.569	1.00 16.87	A
	ATOM	1406	CE2	TYR	A	248	38.665	28.635	13.924	1.00 19.17	A
	ATOM	1407	CZ	TYR	A	248	37.527	28.295	14.643	1.00 19.46	A
	ATOM	1408	OH	TYR	A	248	36.299	28.311	14.023	1.00 18.98	A
40	ATOM	1409	C	TYR	A	248	42.810	30.039	17.993	1.00 20.42	A
	ATOM	1410	O	TYR	A	248	43.208	29.191	18.792	1.00 19.19	A
	ATOM	1411	N	VAL	A	249	43.523	31.114	17.673	1.00 20.20	A
	ATOM	1412	CA	VAL	A	249	44.841	31.343	18.251	1.00 20.91	A
	ATOM	1413	CB	VAL	A	249	45.542	32.532	17.570	1.00 21.18	A
45	ATOM	1414	CG1	VAL	A	249	46.821	32.896	18.317	1.00 22.45	A
	ATOM	1415	CG2	VAL	A	249	45.862	32.170	16.139	1.00 24.01	A
	ATOM	1416	C	VAL	A	249	44.764	31.606	19.750	1.00 21.52	A
	ATOM	1417	O	VAL	A	249	43.915	32.368	20.216	1.00 22.72	A
	ATOM	1418	N	SER	A	250	45.654	30.965	20.503	1.00 20.70	A
50	ATOM	1419	CA	SER	A	250	45.697	31.133	21.951	1.00 21.65	A
	ATOM	1420	CB	SER	A	250	46.370	29.919	22.613	1.00 22.02	A
	ATOM	1421	OG	SER	A	250	47.692	29.725	22.132	1.00 22.12	A
	ATOM	1422	C	SER	A	250	46.476	32.402	22.280	1.00 22.13	A
	ATOM	1423	O	SER	A	250	47.332	32.828	21.511	1.00 22.77	A
55	ATOM	1424	N	PRO	A	251	46.180	33.029	23.425	1.00 22.23	A
	ATOM	1425	CD	PRO	A	251	45.163	32.684	24.433	1.00 22.97	A
	ATOM	1426	CA	PRO	A	251	46.893	34.254	23.800	1.00 22.52	A
	ATOM	1427	CB	PRO	A	251	46.233	34.650	25.127	1.00 23.06	A
	ATOM	1428	CG	PRO	A	251	45.726	33.329	25.676	1.00 22.55	A

	ATOM	1429	C	PRO	A	251	48.414	34.115	23.907	1.00	22.15	A
	ATOM	1430	O	PRO	A	251	49.143	35.047	23.563	1.00	22.62	A
	ATOM	1431	N	GLU	A	252	48.901	32.966	24.367	1.00	20.69	A
	ATOM	1432	CA	GLU	A	252	50.347	32.772	24.500	1.00	21.40	A
5	ATOM	1433	CB	GLU	A	252	50.673	31.382	25.071	1.00	20.59	A
	ATOM	1434	CG	GLU	A	252	49.993	30.232	24.352	1.00	21.91	A
	ATOM	1435	CD	GLU	A	252	48.691	29.822	25.014	1.00	21.51	A
	ATOM	1436	OE1	GLU	A	252	47.989	30.707	25.550	1.00	21.46	A
	ATOM	1437	OE2	GLU	A	252	48.367	28.613	24.993	1.00	20.23	A
10	ATOM	1438	C	GLU	A	252	51.071	32.970	23.167	1.00	22.99	A
	ATOM	1439	O	GLU	A	252	52.191	33.480	23.136	1.00	23.17	A
	ATOM	1440	N	LEU	A	253	50.441	32.576	22.064	1.00	23.00	A
	ATOM	1441	CA	LEU	A	253	51.068	32.753	20.758	1.00	25.62	A
	ATOM	1442	CB	LEU	A	253	50.277	32.029	19.669	1.00	26.75	A
15	ATOM	1443	CG	LEU	A	253	50.743	30.620	19.296	1.00	31.87	A
	ATOM	1444	CD1	LEU	A	253	50.433	29.651	20.422	1.00	31.81	A
	ATOM	1445	CD2	LEU	A	253	50.044	30.179	18.015	1.00	31.86	A
	ATOM	1446	C	LEU	A	253	51.201	34.228	20.371	1.00	26.94	A
	ATOM	1447	O	LEU	A	253	52.107	34.601	19.626	1.00	27.09	A
20	ATOM	1448	N	LEU	A	254	50.297	35.059	20.877	1.00	25.83	A
	ATOM	1449	CA	LEU	A	254	50.297	36.485	20.564	1.00	27.26	A
	ATOM	1450	CB	LEU	A	254	48.858	37.006	20.564	1.00	25.84	A
	ATOM	1451	CG	LEU	A	254	47.882	36.290	19.621	1.00	24.69	A
	ATOM	1452	CD1	LEU	A	254	46.459	36.724	19.932	1.00	23.64	A
25	ATOM	1453	CD2	LEU	A	254	48.236	36.597	18.177	1.00	24.24	A
	ATOM	1454	C	LEU	A	254	51.134	37.314	21.537	1.00	30.62	A
	ATOM	1455	O	LEU	A	254	51.633	38.383	21.187	1.00	32.35	A
	ATOM	1456	N	THR	A	255	51.292	36.821	22.758	1.00	32.47	A
	ATOM	1457	CA	THR	A	255	52.056	37.547	23.759	1.00	36.70	A
30	ATOM	1458	CB	THR	A	255	51.368	37.478	25.127	1.00	34.51	A
	ATOM	1459	OG1	THR	A	255	51.188	36.106	25.494	1.00	35.49	A
	ATOM	1460	CG2	THR	A	255	50.013	38.166	25.077	1.00	33.40	A
	ATOM	1461	C	THR	A	255	53.477	37.035	23.910	1.00	40.09	A
	ATOM	1462	O	THR	A	255	54.430	37.793	23.772	1.00	43.69	A
35	ATOM	1463	N	GLU	A	256	53.617	35.747	24.189	1.00	44.77	A
	ATOM	1464	CA	GLU	A	256	54.932	35.144	24.382	1.00	49.15	A
	ATOM	1465	CB	GLU	A	256	54.866	34.143	25.534	1.00	51.24	A
	ATOM	1466	CG	GLU	A	256	54.514	34.786	26.862	1.00	56.03	A
	ATOM	1467	CD	GLU	A	256	54.053	33.780	27.893	1.00	58.83	A
40	ATOM	1468	OE1	GLU	A	256	54.766	32.776	28.107	1.00	62.13	A
	ATOM	1469	OE2	GLU	A	256	52.979	33.996	28.494	1.00	60.34	A
	ATOM	1470	C	GLU	A	256	55.475	34.456	23.137	1.00	50.09	A
	ATOM	1471	O	GLU	A	256	56.616	33.995	23.127	1.00	50.42	A
	ATOM	1472	N	LYS	A	257	54.658	34.389	22.090	1.00	51.21	A
45	ATOM	1473	CA	LYS	A	257	55.064	33.746	20.845	1.00	51.22	A
	ATOM	1474	CB	LYS	A	257	56.244	34.502	20.227	1.00	53.28	A
	ATOM	1475	CG	LYS	A	257	56.558	34.125	18.790	1.00	55.19	A
	ATOM	1476	CD	LYS	A	257	57.709	34.961	18.253	1.00	57.52	A
	ATOM	1477	CE	LYS	A	257	57.952	34.694	16.777	1.00	58.52	A
50	ATOM	1478	NZ	LYS	A	257	58.290	33.268	16.515	1.00	60.88	A
	ATOM	1479	C	LYS	A	257	55.467	32.302	21.138	1.00	50.74	A
	ATOM	1480	O	LYS	A	257	56.432	31.790	20.577	1.00	52.26	A
	ATOM	1481	N	SER	A	258	54.721	31.654	22.027	1.00	48.07	A
	ATOM	1482	CA	SER	A	258	54.999	30.273	22.402	1.00	46.87	A
55	ATOM	1483	CB	SER	A	258	55.590	30.229	23.812	1.00	48.88	A
	ATOM	1484	OG	SER	A	258	54.741	30.892	24.734	1.00	53.14	A
	ATOM	1485	C	SER	A	258	53.735	29.415	22.342	1.00	44.07	A
	ATOM	1486	O	SER	A	258	52.617	29.932	22.417	1.00	44.17	A
	ATOM	1487	N	ALA	A	259	53.917	28.105	22.204	1.00	38.30	A

	ATOM	1488	CA	ALA	A	259	52.793	27.180	22.127	1.00	34.73	A
	ATOM	1489	CB	ALA	A	259	52.551	26.779	20.684	1.00	34.16	A
	ATOM	1490	C	ALA	A	259	53.042	25.940	22.977	1.00	32.34	A
	ATOM	1491	O	ALA	A	259	54.172	25.459	23.086	1.00	31.81	A
5	ATOM	1492	N	CYS	A	260	51.975	25.428	23.579	1.00	28.58	A
	ATOM	1493	CA	CYS	A	260	52.056	24.244	24.425	1.00	26.27	A
	ATOM	1494	CB	CYS	A	260	52.183	24.654	25.892	1.00	26.53	A
	ATOM	1495	SG	CYS	A	260	50.846	25.739	26.469	1.00	32.91	A
	ATOM	1496	C	CYS	A	260	50.786	23.435	24.224	1.00	22.83	A
10	ATOM	1497	O	CYS	A	260	49.892	23.856	23.495	1.00	22.14	A
	ATOM	1498	N	LYS	A	261	50.706	22.277	24.868	1.00	20.02	A
	ATOM	1499	CA	LYS	A	261	49.526	21.434	24.744	1.00	20.65	A
	ATOM	1500	CB	LYS	A	261	49.619	20.243	25.696	1.00	23.28	A
	ATOM	1501	CG	LYS	A	261	50.716	19.253	25.347	1.00	27.44	A
15	ATOM	1502	CD	LYS	A	261	50.732	18.117	26.350	1.00	29.98	A
	ATOM	1503	CE	LYS	A	261	51.922	17.203	26.134	1.00	32.34	A
	ATOM	1504	NZ	LYS	A	261	51.940	16.121	27.153	1.00	33.28	A
	ATOM	1505	C	LYS	A	261	48.268	22.229	25.062	1.00	19.20	A
	ATOM	1506	O	LYS	A	261	47.253	22.092	24.387	1.00	18.08	A
20	ATOM	1507	N	SER	A	262	48.358	23.068	26.089	1.00	16.92	A
	ATOM	1508	CA	SER	A	262	47.235	23.883	26.534	1.00	18.13	A
	ATOM	1509	CB	SER	A	262	47.644	24.698	27.770	1.00	18.27	A
	ATOM	1510	OG	SER	A	262	46.517	25.258	28.421	1.00	22.53	A
	ATOM	1511	C	SER	A	262	46.736	24.811	25.424	1.00	16.77	A
25	ATOM	1512	O	SER	A	262	45.591	25.254	25.450	1.00	15.69	A
	ATOM	1513	N	SER	A	263	47.595	25.118	24.456	1.00	16.44	A
	ATOM	1514	CA	SER	A	263	47.175	25.970	23.347	1.00	16.89	A
	ATOM	1515	CB	SER	A	263	48.340	26.228	22.382	1.00	18.49	A
	ATOM	1516	OG	SER	A	263	49.402	26.909	23.031	1.00	22.10	A
30	ATOM	1517	C	SER	A	263	46.040	25.257	22.612	1.00	17.79	A
	ATOM	1518	O	SER	A	263	45.099	25.898	22.148	1.00	17.57	A
	ATOM	1519	N	ASP	A	264	46.119	23.928	22.517	1.00	16.30	A
	ATOM	1520	CA	ASP	A	264	45.069	23.166	21.836	1.00	16.72	A
	ATOM	1521	CB	ASP	A	264	45.483	21.704	21.620	1.00	15.92	A
35	ATOM	1522	CG	ASP	A	264	46.544	21.539	20.548	1.00	17.93	A
	ATOM	1523	OD1	ASP	A	264	46.642	22.412	19.661	1.00	16.78	A
	ATOM	1524	OD2	ASP	A	264	47.265	20.515	20.579	1.00	16.64	A
	ATOM	1525	C	ASP	A	264	43.773	23.194	22.646	1.00	17.67	A
	ATOM	1526	O	ASP	A	264	42.681	23.197	22.076	1.00	18.27	A
40	ATOM	1527	N	LEU	A	265	43.898	23.205	23.974	1.00	15.49	A
	ATOM	1528	CA	LEU	A	265	42.730	23.232	24.849	1.00	14.75	A
	ATOM	1529	CB	LEU	A	265	43.147	23.038	26.313	1.00	11.38	A
	ATOM	1530	CG	LEU	A	265	43.711	21.641	26.621	1.00	14.04	A
	ATOM	1531	CD1	LEU	A	265	44.249	21.579	28.052	1.00	13.96	A
45	ATOM	1532	CD2	LEU	A	265	42.619	20.603	26.416	1.00	11.62	A
	ATOM	1533	C	LEU	A	265	41.999	24.557	24.675	1.00	15.13	A
	ATOM	1534	O	LEU	A	265	40.777	24.620	24.785	1.00	16.75	A
	ATOM	1535	N	TRP	A	266	42.746	25.622	24.405	1.00	16.08	A
	ATOM	1536	CA	TRP	A	266	42.118	26.918	24.184	1.00	16.96	A
50	ATOM	1537	CB	TRP	A	266	43.176	28.015	24.023	1.00	17.28	A
	ATOM	1538	CG	TRP	A	266	42.618	29.326	23.521	1.00	20.54	A
	ATOM	1539	CD2	TRP	A	266	42.313	30.490	24.301	1.00	20.07	A
	ATOM	1540	CE2	TRP	A	266	41.782	31.459	23.417	1.00	20.46	A
	ATOM	1541	CE3	TRP	A	266	42.435	30.810	25.660	1.00	20.68	A
55	ATOM	1542	CD1	TRP	A	266	42.270	29.631	22.231	1.00	19.53	A
	ATOM	1543	NE1	TRP	A	266	41.769	30.908	22.163	1.00	19.61	A
	ATOM	1544	CZ2	TRP	A	266	41.372	32.727	23.850	1.00	20.90	A
	ATOM	1545	CZ3	TRP	A	266	42.026	32.073	26.091	1.00	19.45	A
	ATOM	1546	CH2	TRP	A	266	41.501	33.015	25.185	1.00	20.71	A

	ATOM	1547	C	TRP	A	266	41.284	26.795	22.913	1.00	17.22	A
	ATOM	1548	O	TRP	A	266	40.139	27.240	22.863	1.00	18.03	A
	ATOM	1549	N	ALA	A	267	41.863	26.181	21.886	1.00	17.50	A
	ATOM	1550	CA	ALA	A	267	41.155	25.990	20.626	1.00	16.16	A
	ATOM	1551	CB	ALA	A	267	42.050	25.290	19.621	1.00	14.28	A
	ATOM	1552	C	ALA	A	267	39.901	25.159	20.891	1.00	16.28	A
	ATOM	1553	O	ALA	A	267	38.835	25.436	20.346	1.00	16.46	A
	ATOM	1554	N	LEU	A	268	40.031	24.144	21.739	1.00	16.57	A
	ATOM	1555	CA	LEU	A	268	38.890	23.299	22.084	1.00	17.03	A
	ATOM	1556	CB	LEU	A	268	39.292	22.260	23.139	1.00	15.35	A
	ATOM	1557	CG	LEU	A	268	38.158	21.429	23.754	1.00	19.00	A
	ATOM	1558	CD1	LEU	A	268	37.505	20.578	22.678	1.00	16.17	A
	ATOM	1559	CD2	LEU	A	268	38.718	20.537	24.881	1.00	17.49	A
	ATOM	1560	C	LEU	A	268	37.766	24.179	22.628	1.00	15.72	A
	ATOM	1561	O	LEU	A	268	36.603	24.031	22.247	1.00	15.28	A
	ATOM	1562	N	GLY	A	269	38.119	25.099	23.520	1.00	14.34	A
	ATOM	1563	CA	GLY	A	269	37.124	25.989	24.092	1.00	13.39	A
	ATOM	1564	C	GLY	A	269	36.406	26.808	23.031	1.00	14.94	A
	ATOM	1565	O	GLY	A	269	35.193	27.014	23.114	1.00	14.76	A
	ATOM	1566	N	CYS	A	270	37.146	27.279	22.030	1.00	13.86	A
	ATOM	1567	CA	CYS	A	270	36.539	28.061	20.958	1.00	16.80	A
	ATOM	1568	CB	CYS	A	270	37.611	28.634	20.023	1.00	15.97	A
	ATOM	1569	SG	CYS	A	270	38.751	29.810	20.780	1.00	20.48	A
	ATOM	1570	C	CYS	A	270	35.598	27.175	20.140	1.00	17.50	A
	ATOM	1571	O	CYS	A	270	34.516	27.604	19.741	1.00	18.38	A
	ATOM	1572	N	ILE	A	271	36.022	25.939	19.887	1.00	16.99	A
	ATOM	1573	CA	ILE	A	271	35.221	25.004	19.104	1.00	16.66	A
	ATOM	1574	CB	ILE	A	271	36.038	23.741	18.778	1.00	16.53	A
	ATOM	1575	CG2	ILE	A	271	35.155	22.694	18.102	1.00	16.34	A
	ATOM	1576	CG1	ILE	A	271	37.222	24.129	17.882	1.00	15.59	A
	ATOM	1577	CD1	ILE	A	271	38.239	23.018	17.690	1.00	14.88	A
	ATOM	1578	C	ILE	A	271	33.920	24.626	19.809	1.00	16.74	A
	ATOM	1579	O	ILE	A	271	32.865	24.576	19.179	1.00	17.12	A
	ATOM	1580	N	ILE	A	272	33.990	24.357	21.111	1.00	16.13	A
	ATOM	1581	CA	ILE	A	272	32.785	24.021	21.862	1.00	18.30	A
	ATOM	1582	CB	ILE	A	272	33.097	23.747	23.346	1.00	17.77	A
	ATOM	1583	CG2	ILE	A	272	31.796	23.666	24.152	1.00	17.96	A
	ATOM	1584	CG1	ILE	A	272	33.877	22.437	23.481	1.00	19.55	A
	ATOM	1585	CD1	ILE	A	272	34.446	22.217	24.886	1.00	18.64	A
	ATOM	1586	C	ILE	A	272	31.824	25.207	21.776	1.00	19.51	A
	ATOM	1587	O	ILE	A	272	30.624	25.037	21.554	1.00	20.44	A
	ATOM	1588	N	TYR	A	273	32.362	26.409	21.947	1.00	18.52	A
	ATOM	1589	CA	TYR	A	273	31.553	27.615	21.881	1.00	20.48	A
	ATOM	1590	CB	TYR	A	273	32.418	28.847	22.162	1.00	18.98	A
	ATOM	1591	CG	TYR	A	273	31.663	30.161	22.125	1.00	20.26	A
	ATOM	1592	CD1	TYR	A	273	31.229	30.709	20.916	1.00	20.67	A
	ATOM	1593	CE1	TYR	A	273	30.536	31.917	20.880	1.00	20.98	A
	ATOM	1594	CD2	TYR	A	273	31.383	30.857	23.302	1.00	19.82	A
	ATOM	1595	CE2	TYR	A	273	30.691	32.062	23.280	1.00	20.62	A
	ATOM	1596	CZ	TYR	A	273	30.271	32.587	22.067	1.00	21.15	A
	ATOM	1597	OH	TYR	A	273	29.588	33.776	22.049	1.00	21.86	A
	ATOM	1598	C	TYR	A	273	30.902	27.730	20.507	1.00	21.54	A
	ATOM	1599	O	TYR	A	273	29.719	28.049	20.401	1.00	22.80	A
	ATOM	1600	N	GLN	A	274	31.676	27.454	19.461	1.00	21.05	A
	ATOM	1601	CA	GLN	A	274	31.176	27.538	18.095	1.00	21.48	A
	ATOM	1602	CB	GLN	A	274	32.323	27.341	17.097	1.00	21.41	A
	ATOM	1603	CG	GLN	A	274	31.934	27.596	15.645	1.00	23.15	A
	ATOM	1604	CD	GLN	A	274	33.131	27.588	14.706	1.00	24.80	A
	ATOM	1605	OE1	GLN	A	274	34.276	27.446	15.139	1.00	22.51	A

	ATOM	1606	NE2	GLN	A	274	32.870	27.750	13.413	1.00	22.96	A
	ATOM	1607	C	GLN	A	274	30.076	26.517	17.828	1.00	21.51	A
	ATOM	1608	O	GLN	A	274	29.123	26.806	17.108	1.00	20.50	A
	ATOM	1609	N	LEU	A	275	30.207	25.324	18.403	1.00	21.44	A
5	ATOM	1610	CA	LEU	A	275	29.196	24.282	18.208	1.00	20.95	A
	ATOM	1611	CB	LEU	A	275	29.645	22.958	18.846	1.00	19.11	A
	ATOM	1612	CG	LEU	A	275	30.775	22.182	18.159	1.00	21.43	A
	ATOM	1613	CD1	LEU	A	275	31.118	20.936	18.963	1.00	17.64	A
	ATOM	1614	CD2	LEU	A	275	30.342	21.795	16.754	1.00	20.34	A
10	ATOM	1615	C	LEU	A	275	27.860	24.697	18.815	1.00	21.32	A
	ATOM	1616	O	LEU	A	275	26.802	24.461	18.229	1.00	19.75	A
	ATOM	1617	N	VAL	A	276	27.921	25.322	19.987	1.00	19.10	A
	ATOM	1618	CA	VAL	A	276	26.724	25.750	20.702	1.00	22.47	A
	ATOM	1619	CB	VAL	A	276	27.011	25.882	22.217	1.00	20.87	A
15	ATOM	1620	CG1	VAL	A	276	25.742	26.291	22.957	1.00	19.68	A
	ATOM	1621	CG2	VAL	A	276	27.550	24.558	22.766	1.00	19.43	A
	ATOM	1622	C	VAL	A	276	26.127	27.075	20.211	1.00	23.89	A
	ATOM	1623	O	VAL	A	276	24.910	27.199	20.070	1.00	24.90	A
	ATOM	1624	N	ALA	A	277	26.983	28.062	19.965	1.00	24.56	A
20	ATOM	1625	CA	ALA	A	277	26.533	29.374	19.518	1.00	24.72	A
	ATOM	1626	CB	ALA	A	277	27.504	30.444	19.999	1.00	24.36	A
	ATOM	1627	C	ALA	A	277	26.378	29.458	18.005	1.00	25.76	A
	ATOM	1628	O	ALA	A	277	25.577	30.242	17.502	1.00	26.39	A
	ATOM	1629	N	GLY	A	278	27.142	28.651	17.280	1.00	25.13	A
25	ATOM	1630	CA	GLY	A	278	27.062	28.673	15.834	1.00	25.58	A
	ATOM	1631	C	GLY	A	278	28.163	29.524	15.231	1.00	26.50	A
	ATOM	1632	O	GLY	A	278	28.374	29.510	14.015	1.00	28.17	A
	ATOM	1633	N	LEU	A	279	28.866	30.262	16.086	1.00	24.44	A
	ATOM	1634	CA	LEU	A	279	29.962	31.130	15.656	1.00	25.21	A
30	ATOM	1635	CB	LEU	A	279	29.468	32.575	15.500	1.00	25.78	A
	ATOM	1636	CG	LEU	A	279	28.364	32.899	14.490	1.00	28.17	A
	ATOM	1637	CD1	LEU	A	279	27.922	34.344	14.684	1.00	26.60	A
	ATOM	1638	CD2	LEU	A	279	28.862	32.670	13.071	1.00	26.52	A
	ATOM	1639	C	LEU	A	279	31.093	31.116	16.687	1.00	23.47	A
35	ATOM	1640	O	LEU	A	279	30.848	30.994	17.882	1.00	24.44	A
	ATOM	1641	N	PRO	A	280	32.349	31.239	16.236	1.00	23.35	A
	ATOM	1642	CD	PRO	A	280	32.831	31.404	14.855	1.00	22.26	A
	ATOM	1643	CA	PRO	A	280	33.464	31.239	17.189	1.00	23.81	A
	ATOM	1644	CB	PRO	A	280	34.692	31.293	16.282	1.00	23.24	A
40	ATOM	1645	CG	PRO	A	280	34.189	32.020	15.073	1.00	24.89	A
	ATOM	1646	C	PRO	A	280	33.353	32.444	18.137	1.00	22.69	A
	ATOM	1647	O	PRO	A	280	32.750	33.457	17.788	1.00	22.11	A
	ATOM	1648	N	PRO	A	281	33.939	32.344	19.345	1.00	23.06	A
	ATOM	1649	CD	PRO	A	281	34.810	31.223	19.734	1.00	21.37	A
45	ATOM	1650	CA	PRO	A	281	33.935	33.375	20.395	1.00	23.67	A
	ATOM	1651	CB	PRO	A	281	34.781	32.751	21.509	1.00	24.89	A
	ATOM	1652	CG	PRO	A	281	34.749	31.287	21.219	1.00	25.24	A
	ATOM	1653	C	PRO	A	281	34.481	34.752	20.017	1.00	23.75	A
	ATOM	1654	O	PRO	A	281	33.869	35.781	20.317	1.00	21.02	A
50	ATOM	1655	N	PHE	A	282	35.644	34.763	19.379	1.00	22.17	A
	ATOM	1656	CA	PHE	A	282	36.293	36.007	18.998	1.00	23.16	A
	ATOM	1657	CB	PHE	A	282	37.765	35.943	19.406	1.00	21.01	A
	ATOM	1658	CG	PHE	A	282	37.975	35.482	20.822	1.00	22.66	A
	ATOM	1659	CD1	PHE	A	282	37.806	36.361	21.888	1.00	20.06	A
55	ATOM	1660	CD2	PHE	A	282	38.291	34.151	21.093	1.00	20.72	A
	ATOM	1661	CE1	PHE	A	282	37.947	35.921	23.206	1.00	22.66	A
	ATOM	1662	CE2	PHE	A	282	38.433	33.702	22.405	1.00	20.97	A
	ATOM	1663	CZ	PHE	A	282	38.261	34.590	23.466	1.00	19.58	A
	ATOM	1664	C	PHE	A	282	36.169	36.263	17.503	1.00	24.39	A

	ATOM	1665	O	PHE	A	282	36.802	35.585	16.694	1.00 25.80	A
	ATOM	1666	N	ARG	A	283	35.355	37.248	17.142	1.00 24.99	A
	ATOM	1667	CA	ARG	A	283	35.141	37.594	15.741	1.00 26.33	A
	ATOM	1668	CB	ARG	A	283	33.721	37.209	15.316	1.00 28.91	A
5	ATOM	1669	CG	ARG	A	283	33.293	35.808	15.724	1.00 30.27	A
	ATOM	1670	CD	ARG	A	283	31.904	35.493	15.188	1.00 33.36	A
	ATOM	1671	NE	ARG	A	283	30.890	36.392	15.733	1.00 32.76	A
	ATOM	1672	CZ	ARG	A	283	30.372	36.287	16.952	1.00 34.79	A
	ATOM	1673	NH1	ARG	A	283	30.767	35.317	17.768	1.00 35.77	A
10	ATOM	1674	NH2	ARG	A	283	29.458	37.156	17.359	1.00 36.12	A
	ATOM	1675	C	ARG	A	283	35.328	39.096	15.544	1.00 26.47	A
	ATOM	1676	O	ARG	A	283	35.029	39.888	16.438	1.00 26.28	A
	ATOM	1677	N	ALA	A	284	35.818	39.486	14.373	1.00 26.70	A
	ATOM	1678	CA	ALA	A	284	36.033	40.899	14.079	1.00 27.84	A
15	ATOM	1679	CB	ALA	A	284	37.188	41.442	14.914	1.00 26.24	A
	ATOM	1680	C	ALA	A	284	36.327	41.077	12.602	1.00 28.35	A
	ATOM	1681	O	ALA	A	284	36.560	40.101	11.891	1.00 29.91	A
	ATOM	1682	N	GLY	A	285	36.332	42.329	12.153	1.00 29.29	A
	ATOM	1683	CA	GLY	A	285	36.577	42.631	10.753	1.00 29.52	A
20	ATOM	1684	C	GLY	A	285	37.893	42.156	10.168	1.00 30.12	A
	ATOM	1685	O	GLY	A	285	37.974	41.862	8.976	1.00 30.60	A
	ATOM	1686	N	ASN	A	286	38.939	42.097	10.983	1.00 28.49	A
	ATOM	1687	CA	ASN	A	286	40.231	41.644	10.489	1.00 26.71	A
	ATOM	1688	CB	ASN	A	286	41.050	42.825	9.945	1.00 26.11	A
25	ATOM	1689	CG	ASN	A	286	41.310	43.900	10.990	1.00 27.83	A
	ATOM	1690	OD1	ASN	A	286	41.877	43.631	12.049	1.00 27.84	A
	ATOM	1691	ND2	ASN	A	286	40.908	45.131	10.685	1.00 25.95	A
	ATOM	1692	C	ASN	A	286	40.997	40.924	11.584	1.00 26.03	A
	ATOM	1693	O	ASN	A	286	40.540	40.851	12.723	1.00 25.66	A
30	ATOM	1694	N	GLU	A	287	42.162	40.391	11.239	1.00 24.81	A
	ATOM	1695	CA	GLU	A	287	42.965	39.662	12.206	1.00 27.59	A
	ATOM	1696	CB	GLU	A	287	44.145	38.985	11.510	1.00 30.17	A
	ATOM	1697	CG	GLU	A	287	43.776	37.632	10.931	1.00 38.21	A
	ATOM	1698	CD	GLU	A	287	44.900	36.998	10.140	1.00 41.86	A
35	ATOM	1699	OE1	GLU	A	287	46.061	37.036	10.608	1.00 43.08	A
	ATOM	1700	OE2	GLU	A	287	44.612	36.449	9.052	1.00 45.22	A
	ATOM	1701	C	GLU	A	287	43.459	40.485	13.383	1.00 25.05	A
	ATOM	1702	O	GLU	A	287	43.382	40.030	14.521	1.00 26.41	A
	ATOM	1703	N	TYR	A	288	43.966	41.685	13.122	1.00 23.04	A
40	ATOM	1704	CA	TYR	A	288	44.460	42.528	14.205	1.00 22.34	A
	ATOM	1705	CB	TYR	A	288	44.867	43.913	13.691	1.00 21.07	A
	ATOM	1706	CG	TYR	A	288	45.275	44.858	14.805	1.00 21.07	A
	ATOM	1707	CD1	TYR	A	288	46.533	44.762	15.405	1.00 21.23	A
	ATOM	1708	CE1	TYR	A	288	46.891	45.588	16.475	1.00 20.43	A
45	ATOM	1709	CD2	TYR	A	288	44.380	45.809	15.302	1.00 22.32	A
	ATOM	1710	CE2	TYR	A	288	44.725	46.637	16.373	1.00 23.28	A
	ATOM	1711	CZ	TYR	A	288	45.981	46.518	16.953	1.00 22.96	A
	ATOM	1712	OH	TYR	A	288	46.316	47.313	18.024	1.00 23.18	A
	ATOM	1713	C	TYR	A	288	43.402	42.698	15.288	1.00 21.38	A
50	ATOM	1714	O	TYR	A	288	43.710	42.616	16.473	1.00 22.09	A
	ATOM	1715	N	LEU	A	289	42.159	42.939	14.874	1.00 21.88	A
	ATOM	1716	CA	LEU	A	289	41.055	43.130	15.811	1.00 21.98	A
	ATOM	1717	CB	LEU	A	289	39.821	43.673	15.078	1.00 22.90	A
	ATOM	1718	CG	LEU	A	289	39.896	45.130	14.601	1.00 26.52	A
55	ATOM	1719	CD1	LEU	A	289	38.706	45.436	13.696	1.00 26.55	A
	ATOM	1720	CD2	LEU	A	289	39.914	46.071	15.807	1.00 23.13	A
	ATOM	1721	C	LEU	A	289	40.686	41.849	16.560	1.00 21.24	A
	ATOM	1722	O	LEU	A	289	40.256	41.897	17.715	1.00 20.72	A
	ATOM	1723	N	ILE	A	290	40.843	40.708	15.900	1.00 19.62	A

	ATOM	1724	CA	ILE	A	290	40.538	39.433	16.533	1.00	18.54	A
	ATOM	1725	CB	ILE	A	290	40.560	38.281	15.509	1.00	18.52	A
	ATOM	1726	CG2	ILE	A	290	40.503	36.934	16.234	1.00	17.63	A
	ATOM	1727	CG1	ILE	A	290	39.378	38.429	14.545	1.00	18.88	A
5	ATOM	1728	CD1	ILE	A	290	39.421	37.483	13.357	1.00	19.81	A
	ATOM	1729	C	ILE	A	290	41.578	39.167	17.618	1.00	19.09	A
	ATOM	1730	O	ILE	A	290	41.236	38.788	18.737	1.00	18.20	A
	ATOM	1731	N	PHE	A	291	42.849	39.376	17.286	1.00	18.76	A
	ATOM	1732	CA	PHE	A	291	43.925	39.156	18.247	1.00	20.75	A
10	ATOM	1733	CB	PHE	A	291	45.286	39.434	17.606	1.00	20.71	A
	ATOM	1734	CG	PHE	A	291	45.644	38.480	16.503	1.00	22.92	A
	ATOM	1735	CD1	PHE	A	291	45.065	37.214	16.443	1.00	22.98	A
	ATOM	1736	CD2	PHE	A	291	46.588	38.830	15.543	1.00	22.91	A
	ATOM	1737	CE1	PHE	A	291	45.423	36.310	15.440	1.00	24.51	A
15	ATOM	1738	CE2	PHE	A	291	46.954	37.931	14.535	1.00	25.54	A
	ATOM	1739	CZ	PHE	A	291	46.370	36.670	14.485	1.00	23.29	A
	ATOM	1740	C	PHE	A	291	43.739	40.061	19.451	1.00	21.72	A
	ATOM	1741	O	PHE	A	291	43.992	39.671	20.593	1.00	22.32	A
	ATOM	1742	N	GLN	A	292	43.284	41.275	19.178	1.00	23.27	A
20	ATOM	1743	CA	GLN	A	292	43.055	42.264	20.216	1.00	24.01	A
	ATOM	1744	CB	GLN	A	292	42.574	43.559	19.562	1.00	25.77	A
	ATOM	1745	CG	GLN	A	292	42.577	44.773	20.447	1.00	28.45	A
	ATOM	1746	CD	GLN	A	292	42.469	46.057	19.638	1.00	29.83	A
	ATOM	1747	OE1	GLN	A	292	41.520	46.244	18.872	1.00	27.16	A
25	ATOM	1748	NE2	GLN	A	292	43.449	46.944	19.799	1.00	27.61	A
	ATOM	1749	C	GLN	A	292	42.018	41.733	21.204	1.00	22.97	A
	ATOM	1750	O	GLN	A	292	42.200	41.832	22.415	1.00	21.64	A
	ATOM	1751	N	LYS	A	293	40.937	41.154	20.687	1.00	21.82	A
	ATOM	1752	CA	LYS	A	293	39.895	40.612	21.558	1.00	22.18	A
30	ATOM	1753	CB	LYS	A	293	38.664	40.223	20.740	1.00	22.69	A
	ATOM	1754	CG	LYS	A	293	37.919	41.407	20.153	1.00	25.78	A
	ATOM	1755	CD	LYS	A	293	36.651	40.961	19.429	1.00	27.88	A
	ATOM	1756	CE	LYS	A	293	35.857	42.161	18.926	1.00	30.85	A
	ATOM	1757	NZ	LYS	A	293	34.612	41.750	18.214	1.00	32.98	A
35	ATOM	1758	C	LYS	A	293	40.398	39.398	22.343	1.00	21.20	A
	ATOM	1759	O	LYS	A	293	40.041	39.204	23.509	1.00	22.01	A
	ATOM	1760	N	ILE	A	294	41.226	38.583	21.702	1.00	19.91	A
	ATOM	1761	CA	ILE	A	294	41.774	37.394	22.347	1.00	20.28	A
	ATOM	1762	CB	ILE	A	294	42.631	36.575	21.349	1.00	18.98	A
40	ATOM	1763	CG2	ILE	A	294	43.481	35.550	22.098	1.00	17.70	A
	ATOM	1764	CG1	ILE	A	294	41.716	35.897	20.318	1.00	17.93	A
	ATOM	1765	CD1	ILE	A	294	42.467	35.237	19.178	1.00	16.21	A
	ATOM	1766	C	ILE	A	294	42.618	37.727	23.587	1.00	21.94	A
	ATOM	1767	O	ILE	A	294	42.366	37.199	24.673	1.00	20.86	A
45	ATOM	1768	N	ILE	A	295	43.610	38.600	23.439	1.00	21.88	A
	ATOM	1769	CA	ILE	A	295	44.461	38.934	24.582	1.00	24.25	A
	ATOM	1770	CB	ILE	A	295	45.668	39.805	24.175	1.00	23.93	A
	ATOM	1771	CG2	ILE	A	295	46.514	39.066	23.140	1.00	24.61	A
	ATOM	1772	CG1	ILE	A	295	45.189	41.151	23.637	1.00	24.58	A
50	ATOM	1773	CD1	ILE	A	295	46.317	42.149	23.433	1.00	26.69	A
	ATOM	1774	C	ILE	A	295	43.720	39.636	25.717	1.00	24.80	A
	ATOM	1775	O	ILE	A	295	44.214	39.687	26.842	1.00	24.76	A
	ATOM	1776	N	LYS	A	296	42.539	40.173	25.425	1.00	25.33	A
	ATOM	1777	CA	LYS	A	296	41.743	40.853	26.444	1.00	26.80	A
55	ATOM	1778	CB	LYS	A	296	41.178	42.170	25.894	1.00	27.39	A
	ATOM	1779	CG	LYS	A	296	42.240	43.141	25.413	1.00	31.79	A
	ATOM	1780	CD	LYS	A	296	41.634	44.410	24.826	1.00	35.56	A
	ATOM	1781	CE	LYS	A	296	41.009	45.283	25.900	1.00	39.29	A
	ATOM	1782	NZ	LYS	A	296	40.564	46.603	25.357	1.00	41.72	A

ATOM	1783	C	LYS	A	296	40.593	39.958	26.893	1.00	25.50	A
ATOM	1784	O	LYS	A	296	39.770	40.361	27.713	1.00	24.02	A
ATOM	1785	N	LEU	A	297	40.550	38.742	26.349	1.00	25.67	A
ATOM	1786	CA	LEU	A	297	39.500	37.777	26.666	1.00	25.16	A
ATOM	1787	CB	LEU	A	297	39.632	37.285	28.111	1.00	24.80	A
ATOM	1788	CG	LEU	A	297	38.766	36.068	28.460	1.00	26.43	A
ATOM	1789	CD1	LEU	A	297	39.238	34.852	27.646	1.00	26.70	A
ATOM	1790	CD2	LEU	A	297	38.856	35.777	29.951	1.00	24.84	A
ATOM	1791	C	LEU	A	297	38.151	38.459	26.467	1.00	25.11	A
ATOM	1792	O	LEU	A	297	37.261	38.378	27.309	1.00	25.28	A
ATOM	1793	N	GLU	A	298	38.007	39.127	25.331	1.00	24.98	A
ATOM	1794	CA	GLU	A	298	36.786	39.847	25.023	1.00	25.31	A
ATOM	1795	CB	GLU	A	298	37.143	41.139	24.291	1.00	27.13	A
ATOM	1796	CG	GLU	A	298	35.991	42.092	24.108	1.00	31.28	A
ATOM	1797	CD	GLU	A	298	36.419	43.362	23.410	1.00	34.40	A
ATOM	1798	OE1	GLU	A	298	37.348	44.027	23.918	1.00	35.90	A
ATOM	1799	OE2	GLU	A	298	35.832	43.693	22.359	1.00	36.16	A
ATOM	1800	C	GLU	A	298	35.766	39.057	24.207	1.00	23.79	A
ATOM	1801	O	GLU	A	298	35.832	39.017	22.979	1.00	24.35	A
ATOM	1802	N	TYR	A	299	34.825	38.427	24.902	1.00	23.45	A
ATOM	1803	CA	TYR	A	299	33.760	37.663	24.265	1.00	23.98	A
ATOM	1804	CB	TYR	A	299	34.264	36.304	23.755	1.00	20.13	A
ATOM	1805	CG	TYR	A	299	34.348	35.233	24.828	1.00	21.17	A
ATOM	1806	CD1	TYR	A	299	35.336	35.279	25.810	1.00	19.32	A
ATOM	1807	CE1	TYR	A	299	35.389	34.332	26.826	1.00	19.30	A
ATOM	1808	CD2	TYR	A	299	33.410	34.201	24.888	1.00	18.96	A
ATOM	1809	CE2	TYR	A	299	33.456	33.243	25.907	1.00	19.41	A
ATOM	1810	CZ	TYR	A	299	34.449	33.321	26.870	1.00	18.79	A
ATOM	1811	OH	TYR	A	299	34.511	32.401	27.881	1.00	18.77	A
ATOM	1812	C	TYR	A	299	32.699	37.437	25.331	1.00	25.20	A
ATOM	1813	O	TYR	A	299	32.942	37.681	26.506	1.00	26.46	A
ATOM	1814	N	ASP	A	300	31.522	36.981	24.927	1.00	26.94	A
ATOM	1815	CA	ASP	A	300	30.467	36.710	25.891	1.00	30.60	A
ATOM	1816	CB	ASP	A	300	29.665	37.981	26.179	1.00	35.86	A
ATOM	1817	CG	ASP	A	300	29.228	38.687	24.923	1.00	42.04	A
ATOM	1818	OD1	ASP	A	300	28.450	38.088	24.149	1.00	45.98	A
ATOM	1819	OD2	ASP	A	300	29.666	39.840	24.707	1.00	45.69	A
ATOM	1820	C	ASP	A	300	29.564	35.608	25.363	1.00	29.26	A
ATOM	1821	O	ASP	A	300	29.590	35.299	24.172	1.00	28.64	A
ATOM	1822	N	PHE	A	301	28.778	35.011	26.253	1.00	28.96	A
ATOM	1823	CA	PHE	A	301	27.884	33.924	25.871	1.00	30.48	A
ATOM	1824	CB	PHE	A	301	27.818	32.854	26.968	1.00	29.17	A
ATOM	1825	CG	PHE	A	301	29.147	32.279	27.356	1.00	29.29	A
ATOM	1826	CD1	PHE	A	301	29.978	32.949	28.245	1.00	27.31	A
ATOM	1827	CD2	PHE	A	301	29.560	31.050	26.845	1.00	27.89	A
ATOM	1828	CE1	PHE	A	301	31.205	32.403	28.625	1.00	28.83	A
ATOM	1829	CE2	PHE	A	301	30.781	30.498	27.217	1.00	28.05	A
ATOM	1830	CZ	PHE	A	301	31.605	31.175	28.110	1.00	28.27	A
ATOM	1831	C	PHE	A	301	26.459	34.384	25.619	1.00	32.20	A
ATOM	1832	O	PHE	A	301	25.946	35.261	26.317	1.00	32.36	A
ATOM	1833	N	PRO	A	302	25.798	33.804	24.607	1.00	33.29	A
ATOM	1834	CD	PRO	A	302	26.313	32.943	23.529	1.00	34.04	A
ATOM	1835	CA	PRO	A	302	24.415	34.199	24.341	1.00	35.24	A
ATOM	1836	CB	PRO	A	302	24.144	33.608	22.959	1.00	34.01	A
ATOM	1837	CG	PRO	A	302	25.041	32.413	22.921	1.00	35.48	A
ATOM	1838	C	PRO	A	302	23.567	33.561	25.444	1.00	37.39	A
ATOM	1839	O	PRO	A	302	23.935	32.518	25.986	1.00	38.49	A
ATOM	1840	N	ALA	A	303	22.447	34.188	25.783	1.00	39.36	A
ATOM	1841	CA	ALA	A	303	21.572	33.692	26.843	1.00	40.65	A

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ATOM   1842  CB  ALA A 303      20.280  34.506  26.862  1.00 41.66      A
ATOM   1843  C   ALA A 303      21.238  32.197  26.814  1.00 41.25      A
ATOM   1844  O   ALA A 303      21.253  31.537  27.854  1.00 43.16      A
ATOM   1845  N   ALA A 304      20.945  31.665  25.631  1.00 41.04      A
ATOM   1846  CA  ALA A 304      20.569  30.258  25.480  1.00 40.66      A
ATOM   1847  CB  ALA A 304      20.121  30.004  24.040  1.00 41.36      A
ATOM   1848  C   ALA A 304      21.628  29.223  25.876  1.00 39.61      A
ATOM   1849  O   ALA A 304      21.298  28.156  26.395  1.00 40.61      A
ATOM   1850  N   PHE A 305      22.891  29.543  25.617  1.00 36.21      A
ATOM   1851  CA  PHE A 305      24.022  28.662  25.909  1.00 32.08      A
ATOM   1852  CB  PHE A 305      25.259  29.519  26.187  1.00 29.46      A
ATOM   1853  CG  PHE A 305      26.536  28.917  25.690  1.00 28.15      A
ATOM   1854  CD1 PHE A 305      27.146  27.875  26.377  1.00 26.20      A
ATOM   1855  CD2 PHE A 305      27.127  29.386  24.521  1.00 27.05      A
ATOM   1856  CE1 PHE A 305      28.330  27.308  25.908  1.00 26.92      A
ATOM   1857  CE2 PHE A 305      28.312  28.826  24.042  1.00 26.62      A
ATOM   1858  CZ  PHE A 305      28.914  27.786  24.737  1.00 26.61      A
ATOM   1859  C   PHE A 305      23.811  27.664  27.057  1.00 30.09      A
ATOM   1860  O   PHE A 305      23.518  28.051  28.187  1.00 31.51      A
ATOM   1861  N   PHE A 306      23.964  26.378  26.758  1.00 27.01      A
ATOM   1862  CA  PHE A 306      23.801  25.334  27.769  1.00 26.30      A
ATOM   1863  CB  PHE A 306      24.157  23.970  27.170  1.00 25.03      A
ATOM   1864  CG  PHE A 306      23.548  23.725  25.815  1.00 27.24      A
ATOM   1865  CD1 PHE A 306      22.170  23.831  25.622  1.00 28.40      A
ATOM   1866  CD2 PHE A 306      24.350  23.386  24.728  1.00 27.84      A
ATOM   1867  CE1 PHE A 306      21.601  23.603  24.365  1.00 28.05      A
ATOM   1868  CE2 PHE A 306      23.792  23.155  23.465  1.00 28.31      A
ATOM   1869  CZ  PHE A 306      22.415  23.263  23.283  1.00 28.00      A
ATOM   1870  C   PHE A 306      24.711  25.652  28.961  1.00 26.23      A
ATOM   1871  O   PHE A 306      25.927  25.775  28.811  1.00 25.59      A
ATOM   1872  N   PRO A 307      24.125  25.796  30.163  1.00 26.67      A
ATOM   1873  CD  PRO A 307      22.685  25.625  30.430  1.00 27.95      A
ATOM   1874  CA  PRO A 307      24.842  26.110  31.405  1.00 26.59      A
ATOM   1875  CB  PRO A 307      23.795  25.832  32.481  1.00 26.14      A
ATOM   1876  CG  PRO A 307      22.531  26.250  31.803  1.00 27.86      A
ATOM   1877  C   PRO A 307      26.145  25.355  31.659  1.00 25.58      A
ATOM   1878  O   PRO A 307      27.189  25.964  31.900  1.00 22.65      A
ATOM   1879  N   LYS A 308      26.085  24.031  31.620  1.00 24.46      A
ATOM   1880  CA  LYS A 308      27.274  23.232  31.867  1.00 23.91      A
ATOM   1881  CB  LYS A 308      26.887  21.760  32.024  1.00 23.25      A
ATOM   1882  CG  LYS A 308      26.062  21.532  33.285  1.00 28.49      A
ATOM   1883  CD  LYS A 308      25.618  20.093  33.466  1.00 30.17      A
ATOM   1884  CE  LYS A 308      24.760  19.973  34.722  1.00 33.12      A
ATOM   1885  NZ  LYS A 308      24.122  18.636  34.860  1.00 34.13      A
ATOM   1886  C   LYS A 308      28.314  23.426  30.769  1.00 22.84      A
ATOM   1887  O   LYS A 308      29.514  23.411  31.042  1.00 22.46      A
ATOM   1888  N   ALA A 309      27.861  23.621  29.534  1.00 21.59      A
ATOM   1889  CA  ALA A 309      28.792  23.848  28.432  1.00 20.02      A
ATOM   1890  CB  ALA A 309      28.056  23.856  27.106  1.00 18.80      A
ATOM   1891  C   ALA A 309      29.481  25.191  28.662  1.00 21.41      A
ATOM   1892  O   ALA A 309      30.680  25.335  28.427  1.00 21.39      A
ATOM   1893  N   ARG A 310      28.717  26.179  29.121  1.00 21.39      A
ATOM   1894  CA  ARG A 310      29.290  27.494  29.388  1.00 22.02      A
ATOM   1895  CB  ARG A 310      28.213  28.479  29.854  1.00 22.39      A
ATOM   1896  CG  ARG A 310      28.806  29.756  30.436  1.00 25.30      A
ATOM   1897  CD  ARG A 310      27.780  30.852  30.664  1.00 28.33      A
ATOM   1898  NE  ARG A 310      28.420  32.039  31.230  1.00 30.18      A
ATOM   1899  CZ  ARG A 310      27.901  33.263  31.203  1.00 32.07      A
ATOM   1900  NH1 ARG A 310      26.719  33.477  30.634  1.00 31.19      A
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	ATOM	1901	NH2	ARG	A	310	28.567	34.277	31.742	1.00 30.49	A
	ATOM	1902	C	ARG	A	310	30.376	27.388	30.458	1.00 21.65	A
	ATOM	1903	O	ARG	A	310	31.464	27.949	30.311	1.00 20.36	A
	ATOM	1904	N	ASP	A	311	30.074	26.677	31.541	1.00 19.57	A
5	ATOM	1905	CA	ASP	A	311	31.043	26.512	32.615	1.00 20.18	A
	ATOM	1906	CB	ASP	A	311	30.460	25.649	33.739	1.00 20.39	A
	ATOM	1907	CG	ASP	A	311	31.439	25.446	34.881	1.00 23.35	A
	ATOM	1908	OD1	ASP	A	311	32.158	24.428	34.885	1.00 24.91	A
	ATOM	1909	OD2	ASP	A	311	31.500	26.312	35.776	1.00 26.96	A
10	ATOM	1910	C	ASP	A	311	32.322	25.877	32.073	1.00 19.73	A
	ATOM	1911	O	ASP	A	311	33.422	26.289	32.439	1.00 19.30	A
	ATOM	1912	N	LEU	A	312	32.179	24.891	31.188	1.00 16.32	A
	ATOM	1913	CA	LEU	A	312	33.349	24.226	30.611	1.00 16.66	A
	ATOM	1914	CB	LEU	A	312	32.927	23.035	29.744	1.00 16.12	A
15	ATOM	1915	CG	LEU	A	312	34.050	22.320	28.974	1.00 14.73	A
	ATOM	1916	CD1	LEU	A	312	35.192	21.935	29.912	1.00 14.56	A
	ATOM	1917	CD2	LEU	A	312	33.477	21.084	28.289	1.00 14.22	A
	ATOM	1918	C	LEU	A	312	34.181	25.189	29.774	1.00 16.61	A
	ATOM	1919	O	LEU	A	312	35.402	25.241	29.910	1.00 16.20	A
20	ATOM	1920	N	VAL	A	313	33.515	25.949	28.908	1.00 16.20	A
	ATOM	1921	CA	VAL	A	313	34.207	26.907	28.058	1.00 15.37	A
	ATOM	1922	CB	VAL	A	313	33.216	27.648	27.130	1.00 16.42	A
	ATOM	1923	CG1	VAL	A	313	33.915	28.796	26.426	1.00 16.93	A
	ATOM	1924	CG2	VAL	A	313	32.644	26.672	26.103	1.00 17.88	A
25	ATOM	1925	C	VAL	A	313	34.960	27.923	28.911	1.00 17.39	A
	ATOM	1926	O	VAL	A	313	36.093	28.294	28.591	1.00 18.00	A
	ATOM	1927	N	GLU	A	314	34.342	28.364	30.004	1.00 17.61	A
	ATOM	1928	CA	GLU	A	314	34.986	29.331	30.885	1.00 20.43	A
	ATOM	1929	CB	GLU	A	314	34.009	29.816	31.959	1.00 22.14	A
30	ATOM	1930	CG	GLU	A	314	32.800	30.550	31.396	1.00 26.52	A
	ATOM	1931	CD	GLU	A	314	31.852	31.025	32.478	1.00 31.26	A
	ATOM	1932	OE1	GLU	A	314	31.580	30.246	33.417	1.00 33.48	A
	ATOM	1933	OE2	GLU	A	314	31.370	32.173	32.387	1.00 34.81	A
	ATOM	1934	C	GLU	A	314	36.217	28.721	31.539	1.00 19.15	A
35	ATOM	1935	O	GLU	A	314	37.134	29.433	31.934	1.00 21.47	A
	ATOM	1936	N	LYS	A	315	36.245	27.400	31.651	1.00 19.51	A
	ATOM	1937	CA	LYS	A	315	37.394	26.749	32.258	1.00 19.17	A
	ATOM	1938	CB	LYS	A	315	36.946	25.514	33.043	1.00 18.84	A
	ATOM	1939	CG	LYS	A	315	36.280	25.885	34.368	1.00 19.62	A
40	ATOM	1940	CD	LYS	A	315	35.653	24.696	35.073	1.00 19.22	A
	ATOM	1941	CE	LYS		315	35.070	25.095	36.427	0.50 21.00	AC1
	ATOM	1942	NZ	LYS		315	36.119	25.552	37.381	0.50 19.53	AC1
	ATOM	1943	C	LYS	A	315	38.452	26.393	31.218	1.00 18.96	A
	ATOM	1944	O	LYS	A	315	39.511	25.873	31.561	1.00 19.85	A
45	ATOM	1945	N	LEU	A	316	38.164	26.691	29.950	1.00 17.08	A
	ATOM	1946	CA	LEU	A	316	39.102	26.429	28.854	1.00 16.41	A
	ATOM	1947	CB	LEU	A	316	38.414	25.636	27.738	1.00 13.81	A
	ATOM	1948	CG	LEU	A	316	38.028	24.201	28.115	1.00 14.39	A
	ATOM	1949	CD1	LEU	A	316	37.139	23.597	27.031	1.00 12.38	A
50	ATOM	1950	CD2	LEU	A	316	39.302	23.373	28.309	1.00 12.77	A
	ATOM	1951	C	LEU	A	316	39.652	27.743	28.290	1.00 17.12	A
	ATOM	1952	O	LEU	A	316	40.851	27.860	28.023	1.00 16.53	A
	ATOM	1953	N	LEU	A	317	38.780	28.729	28.105	1.00 16.27	A
	ATOM	1954	CA	LEU	A	317	39.228	30.022	27.596	1.00 17.52	A
55	ATOM	1955	CB	LEU	A	317	38.083	30.752	26.887	1.00 16.37	A
	ATOM	1956	CG	LEU	A	317	37.448	29.973	25.727	1.00 18.81	A
	ATOM	1957	CD1	LEU	A	317	36.415	30.851	25.018	1.00 16.47	A
	ATOM	1958	CD2	LEU	A	317	38.528	29.526	24.741	1.00 17.87	A
	ATOM	1959	C	LEU	A	317	39.745	30.841	28.774	1.00 18.27	A

	ATOM	1960	O	LEU	A	317	39.078	31.753	29.273	1.00	18.58	A
	ATOM	1961	N	VAL	A	318	40.937	30.475	29.229	1.00	18.02	A
	ATOM	1962	CA	VAL	A	318	41.593	31.141	30.342	1.00	18.85	A
	ATOM	1963	CB	VAL	A	318	41.846	30.153	31.500	1.00	19.91	A
5	ATOM	1964	CG1	VAL	A	318	42.590	30.848	32.634	1.00	20.01	A
	ATOM	1965	CG2	VAL	A	318	40.520	29.584	31.990	1.00	19.44	A
	ATOM	1966	C	VAL	A	318	42.923	31.657	29.811	1.00	19.67	A
	ATOM	1967	O	VAL	A	318	43.690	30.902	29.208	1.00	18.26	A
	ATOM	1968	N	LEU	A	319	43.197	32.939	30.028	1.00	20.07	A
10	ATOM	1969	CA	LEU	A	319	44.436	33.533	29.538	1.00	20.98	A
	ATOM	1970	CB	LEU	A	319	44.521	35.002	29.968	1.00	21.64	A
	ATOM	1971	CG	LEU	A	319	43.418	35.908	29.408	1.00	24.38	A
	ATOM	1972	CD1	LEU	A	319	43.606	37.332	29.935	1.00	23.28	A
	ATOM	1973	CD2	LEU	A	319	43.453	35.887	27.875	1.00	24.33	A
15	ATOM	1974	C	LEU	A	319	45.680	32.774	29.994	1.00	20.38	A
	ATOM	1975	O	LEU	A	319	46.568	32.496	29.192	1.00	21.34	A
	ATOM	1976	N	ASP	A	320	45.742	32.440	31.280	1.00	20.22	A
	ATOM	1977	CA	ASP	A	320	46.879	31.707	31.833	1.00	20.90	A
	ATOM	1978	CB	ASP	A	320	46.842	31.760	33.365	1.00	20.76	A
20	ATOM	1979	CG	ASP	A	320	48.049	31.102	34.004	1.00	21.51	A
	ATOM	1980	OD1	ASP	A	320	48.669	30.226	33.367	1.00	23.46	A
	ATOM	1981	OD2	ASP	A	320	48.371	31.450	35.159	1.00	23.89	A
	ATOM	1982	C	ASP	A	320	46.814	30.247	31.367	1.00	20.06	A
	ATOM	1983	O	ASP	A	320	45.988	29.476	31.840	1.00	20.54	A
25	ATOM	1984	N	ALA	A	321	47.700	29.876	30.451	1.00	20.68	A
	ATOM	1985	CA	ALA	A	321	47.733	28.522	29.903	1.00	22.04	A
	ATOM	1986	CB	ALA	A	321	48.860	28.411	28.881	1.00	20.75	A
	ATOM	1987	C	ALA	A	321	47.858	27.400	30.940	1.00	21.62	A
	ATOM	1988	O	ALA	A	321	47.482	26.259	30.665	1.00	21.99	A
30	ATOM	1989	N	THR	A	322	48.372	27.715	32.127	1.00	20.89	A
	ATOM	1990	CA	THR	A	322	48.531	26.698	33.167	1.00	20.82	A
	ATOM	1991	CB	THR	A	322	49.670	27.051	34.146	1.00	19.47	A
	ATOM	1992	OG1	THR	A	322	49.341	28.253	34.848	1.00	20.19	A
	ATOM	1993	CG2	THR	A	322	50.981	27.249	33.394	1.00	21.59	A
35	ATOM	1994	C	THR	A	322	47.264	26.498	33.983	1.00	19.55	A
	ATOM	1995	O	THR	A	322	47.235	25.673	34.894	1.00	21.13	A
	ATOM	1996	N	LYS	A	323	46.216	27.248	33.661	1.00	19.33	A
	ATOM	1997	CA	LYS	A	323	44.962	27.122	34.392	1.00	21.20	A
	ATOM	1998	CB	LYS	A	323	44.580	28.460	35.030	1.00	23.75	A
40	ATOM	1999	CG	LYS	A	323	45.562	28.933	36.084	1.00	28.45	A
	ATOM	2000	CD	LYS	A	323	45.055	30.177	36.799	1.00	33.76	A
	ATOM	2001	CE	LYS	A	323	46.087	30.678	37.802	1.00	36.15	A
	ATOM	2002	NZ	LYS	A	323	46.532	29.569	38.693	1.00	37.34	A
	ATOM	2003	C	LYS	A	323	43.806	26.614	33.539	1.00	20.68	A
45	ATOM	2004	O	LYS	A	323	42.649	26.757	33.915	1.00	20.42	A
	ATOM	2005	N	ARG	A	324	44.114	26.019	32.392	1.00	19.97	A
	ATOM	2006	CA	ARG	A	324	43.060	25.494	31.531	1.00	17.98	A
	ATOM	2007	CB	ARG	A	324	43.461	25.609	30.061	1.00	15.95	A
	ATOM	2008	CG	ARG	A	324	43.534	27.050	29.603	1.00	17.34	A
50	ATOM	2009	CD	ARG	A	324	43.996	27.194	28.172	1.00	19.80	A
	ATOM	2010	NE	ARG	A	324	44.438	28.565	27.944	1.00	16.93	A
	ATOM	2011	CZ	ARG	A	324	45.410	28.908	27.108	1.00	19.88	A
	ATOM	2012	NH1	ARG	A	324	46.045	27.978	26.398	1.00	14.58	A
	ATOM	2013	NH2	ARG	A	324	45.774	30.181	27.015	1.00	16.51	A
55	ATOM	2014	C	ARG	A	324	42.762	24.046	31.883	1.00	18.32	A
	ATOM	2015	O	ARG	A	324	43.673	23.222	32.006	1.00	18.20	A
	ATOM	2016	N	LEU	A	325	41.479	23.748	32.055	1.00	18.32	A
	ATOM	2017	CA	LEU	A	325	41.050	22.403	32.395	1.00	17.79	A
	ATOM	2018	CB	LEU	A	325	39.523	22.335	32.425	1.00	17.03	A

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ATOM   2019  CG  LEU A 325      38.896  21.125  33.116  1.00 15.91      A
ATOM   2020  CD1 LEU A 325      39.392  21.048  34.557  1.00 15.93      A
ATOM   2021  CD2 LEU A 325      37.375  21.255  33.084  1.00 16.56      A
ATOM   2022  C   LEU A 325      41.599  21.433  31.356  1.00 18.68      A
ATOM   2023  O   LEU A 325      41.347  21.586  30.157  1.00 18.28      A
ATOM   2024  N   GLY A 326      42.354  20.439  31.821  1.00 18.18      A
ATOM   2025  CA  GLY A 326      42.931  19.462  30.915  1.00 16.36      A
ATOM   2026  C   GLY A 326      44.443  19.558  30.807  1.00 19.15      A
ATOM   2027  O   GLY A 326      45.093  18.592  30.404  1.00 19.52      A
ATOM   2028  N   CYS A 327      45.016  20.708  31.161  1.00 18.16      A
ATOM   2029  CA  CYS A 327      46.463  20.867  31.075  1.00 19.30      A
ATOM   2030  CB  CYS A 327      46.856  22.350  31.058  1.00 20.22      A
ATOM   2031  SG  CYS A 327      46.782  23.200  32.649  1.00 21.97      A
ATOM   2032  C   CYS A 327      47.169  20.157  32.228  1.00 20.22      A
ATOM   2033  O   CYS A 327      46.561  19.828  33.246  1.00 17.92      A
ATOM   2034  N   GLU A 328      48.463  19.933  32.053  1.00 20.51      A
ATOM   2035  CA  GLU A 328      49.274  19.244  33.042  1.00 23.34      A
ATOM   2036  CB  GLU A 328      50.710  19.139  32.507  1.00 28.68      A
ATOM   2037  CG  GLU A 328      50.754  18.367  31.175  1.00 38.24      A
ATOM   2038  CD  GLU A 328      52.067  18.500  30.414  1.00 43.23      A
ATOM   2039  OE1 GLU A 328      52.535  19.643  30.218  1.00 46.22      A
ATOM   2040  OE2 GLU A 328      52.618  17.459  29.991  1.00 44.90      A
ATOM   2041  C   GLU A 328      49.234  19.876  34.435  1.00 22.11      A
ATOM   2042  O   GLU A 328      49.147  19.161  35.437  1.00 20.27      A
ATOM   2043  N   GLU A 329      49.276  21.204  34.506  1.00 18.40      A
ATOM   2044  CA  GLU A 329      49.248  21.875  35.801  1.00 20.13      A
ATOM   2045  CB  GLU A 329      49.587  23.363  35.657  1.00 20.36      A
ATOM   2046  CG  GLU A 329      51.014  23.651  35.190  1.00 24.05      A
ATOM   2047  CD  GLU A 329      51.191  23.518  33.688  1.00 25.93      A
ATOM   2048  OE1 GLU A 329      50.213  23.154  32.995  1.00 26.61      A
ATOM   2049  OE2 GLU A 329      52.311  23.781  33.198  1.00 27.19      A
ATOM   2050  C   GLU A 329      47.890  21.718  36.480  1.00 19.36      A
ATOM   2051  O   GLU A 329      47.775  21.879  37.694  1.00 18.74      A
ATOM   2052  N   MET A 330      46.863  21.415  35.691  1.00 17.28      A
ATOM   2053  CA  MET A 330      45.520  21.220  36.229  1.00 16.38      A
ATOM   2054  CB  MET A 330      44.474  21.833  35.294  1.00 17.65      A
ATOM   2055  CG  MET A 330      44.460  23.365  35.311  1.00 22.95      A
ATOM   2056  SD  MET A 330      44.186  24.026  36.979  1.00 26.78      A
ATOM   2057  CE  MET A 330      42.435  23.712  37.186  1.00 24.69      A
ATOM   2058  C   MET A 330      45.257  19.730  36.422  1.00 14.30      A
ATOM   2059  O   MET A 330      44.127  19.304  36.629  1.00 15.39      A
ATOM   2060  N   GLU A 331      46.327  18.949  36.346  1.00 15.60      A
ATOM   2061  CA  GLU A 331      46.289  17.501  36.531  1.00 17.08      A
ATOM   2062  CB  GLU A 331      45.607  17.155  37.862  1.00 17.00      A
ATOM   2063  CG  GLU A 331      46.070  18.027  39.038  1.00 17.46      A
ATOM   2064  CD  GLU A 331      47.591  18.179  39.145  1.00 20.16      A
ATOM   2065  OE1 GLU A 331      48.034  19.073  39.896  1.00 21.39      A
ATOM   2066  OE2 GLU A 331      48.345  17.420  38.500  1.00 18.87      A
ATOM   2067  C   GLU A 331      45.697  16.658  35.398  1.00 17.80      A
ATOM   2068  O   GLU A 331      45.107  15.602  35.636  1.00 20.40      A
ATOM   2069  N   GLY A 332      45.844  17.133  34.167  1.00 16.23      A
ATOM   2070  CA  GLY A 332      45.420  16.353  33.015  1.00 14.10      A
ATOM   2071  C   GLY A 332      43.982  16.154  32.596  1.00 13.54      A
ATOM   2072  O   GLY A 332      43.063  16.864  33.017  1.00 11.96      A
ATOM   2073  N   TYR A 333      43.804  15.141  31.750  1.00 14.37      A
ATOM   2074  CA  TYR A 333      42.510  14.806  31.182  1.00 13.56      A
ATOM   2075  CB  TYR A 333      42.722  13.892  29.968  1.00 15.00      A
ATOM   2076  CG  TYR A 333      43.153  14.683  28.752  1.00 16.46      A
ATOM   2077  CD1 TYR A 333      42.206  15.172  27.849  1.00 15.29      A
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ATOM   2078  CE1 TYR A 333      42.573  16.002  26.794  1.00 13.42      A
ATOM   2079  CD2 TYR A 333      44.490  15.039  28.561  1.00 14.91      A
ATOM   2080  CE2 TYR A 333      44.872  15.877  27.499  1.00 14.87      A
ATOM   2081  CZ  TYR A 333      43.902  16.353  26.626  1.00 15.61      A
ATOM   2082  OH  TYR A 333      44.244  17.197  25.599  1.00 17.29      A
ATOM   2083  C   TYR A 333      41.470  14.230  32.127  1.00 15.23      A
ATOM   2084  O   TYR A 333      40.278  14.323  31.846  1.00 16.63      A
ATOM   2085  N   GLY A 334      41.907  13.650  33.244  1.00 15.50      A
ATOM   2086  CA  GLY A 334      40.957  13.100  34.202  1.00 15.07      A
ATOM   2087  C   GLY A 334      39.925  14.146  34.616  1.00 16.40      A
ATOM   2088  O   GLY A 334      38.724  13.946  34.433  1.00 15.05      A
ATOM   2089  N   PRO A 335      40.366  15.278  35.184  1.00 14.96      A
ATOM   2090  CD  PRO A 335      41.727  15.531  35.689  1.00 15.88      A
ATOM   2091  CA  PRO A 335      39.444  16.339  35.606  1.00 15.29      A
ATOM   2092  CB  PRO A 335      40.383  17.397  36.178  1.00 13.19      A
ATOM   2093  CG  PRO A 335      41.485  16.569  36.758  1.00 13.81      A
ATOM   2094  C   PRO A 335      38.594  16.877  34.448  1.00 15.84      A
ATOM   2095  O   PRO A 335      37.423  17.204  34.631  1.00 14.84      A
ATOM   2096  N   LEU A 336      39.184  16.971  33.257  1.00 16.12      A
ATOM   2097  CA  LEU A 336      38.450  17.465  32.094  1.00 15.52      A
ATOM   2098  CB  LEU A 336      39.396  17.653  30.898  1.00 14.39      A
ATOM   2099  CG  LEU A 336      38.770  17.991  29.538  1.00 15.46      A
ATOM   2100  CD1 LEU A 336      37.836  19.182  29.662  1.00 11.25      A
ATOM   2101  CD2 LEU A 336      39.884  18.285  28.528  1.00 14.11      A
ATOM   2102  C   LEU A 336      37.321  16.508  31.714  1.00 16.28      A
ATOM   2103  O   LEU A 336      36.176  16.921  31.540  1.00 15.51      A
ATOM   2104  N   LYS A 337      37.640  15.225  31.592  1.00 17.22      A
ATOM   2105  CA  LYS A 337      36.624  14.243  31.235  1.00 17.39      A
ATOM   2106  CB  LYS A 337      37.293  12.900  30.921  1.00 17.68      A
ATOM   2107  CG  LYS A 337      38.170  12.994  29.676  1.00 22.31      A
ATOM   2108  CD  LYS A 337      39.213  11.892  29.592  1.00 24.60      A
ATOM   2109  CE  LYS A 337      38.620  10.560  29.189  1.00 24.76      A
ATOM   2110  NZ  LYS A 337      39.710   9.560  28.997  1.00 25.05      A
ATOM   2111  C   LYS A 337      35.577  14.096  32.342  1.00 17.33      A
ATOM   2112  O   LYS A 337      34.456  13.652  32.090  1.00 14.42      A
ATOM   2113  N   ALA A 338      35.928  14.500  33.559  1.00 15.83      A
ATOM   2114  CA  ALA A 338      34.989  14.395  34.674  1.00 17.52      A
ATOM   2115  CB  ALA A 338      35.749  14.167  35.980  1.00 19.68      A
ATOM   2116  C   ALA A 338      34.095  15.621  34.804  1.00 18.83      A
ATOM   2117  O   ALA A 338      33.252  15.687  35.695  1.00 18.94      A
ATOM   2118  N   HIS A 339      34.262  16.596  33.918  1.00 19.42      A
ATOM   2119  CA  HIS A 339      33.438  17.796  34.004  1.00 19.28      A
ATOM   2120  CB  HIS A 339      33.865  18.819  32.949  1.00 19.20      A
ATOM   2121  CG  HIS A 339      33.163  20.134  33.074  1.00 20.26      A
ATOM   2122  CD2 HIS A 339      33.549  21.299  33.649  1.00 18.95      A
ATOM   2123  ND1 HIS A 339      31.880  20.340  32.612  1.00 19.10      A
ATOM   2124  CE1 HIS A 339      31.506  21.576  32.896  1.00 22.19      A
ATOM   2125  NE2 HIS A 339      32.500  22.179  33.525  1.00 21.98      A
ATOM   2126  C   HIS A 339      31.957  17.448  33.845  1.00 19.13      A
ATOM   2127  O   HIS A 339      31.597  16.576  33.061  1.00 19.52      A
ATOM   2128  N   PRO A 340      31.079  18.125  34.606  1.00 19.80      A
ATOM   2129  CD  PRO A 340      31.424  19.119  35.640  1.00 19.08      A
ATOM   2130  CA  PRO A 340      29.630  17.900  34.569  1.00 20.52      A
ATOM   2131  CB  PRO A 340      29.091  19.058  35.396  1.00 20.74      A
ATOM   2132  CG  PRO A 340      30.146  19.207  36.454  1.00 19.20      A
ATOM   2133  C   PRO A 340      29.000  17.834  33.176  1.00 21.42      A
ATOM   2134  O   PRO A 340      28.049  17.088  32.955  1.00 22.48      A
ATOM   2135  N   PHE A 341      29.528  18.606  32.237  1.00 21.33      A
ATOM   2136  CA  PHE A 341      28.985  18.610  30.886  1.00 21.57      A
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ATOM   2137  CB  PHE A 341      29.739  19.624  30.017  1.00 21.64      A
ATOM   2138  CG  PHE A 341      29.207  19.740  28.613  1.00 23.18      A
ATOM   2139  CD1 PHE A 341      27.903  20.171  28.382  1.00 22.58      A
ATOM   2140  CD2 PHE A 341      30.013  19.431  27.522  1.00 21.95      A
ATOM   2141  CE1 PHE A 341      27.410  20.292  27.082  1.00 23.54      A
ATOM   2142  CE2 PHE A 341      29.533  19.548  26.220  1.00 21.83      A
ATOM   2143  CZ  PHE A 341      28.228  19.980  25.998  1.00 23.23      A
ATOM   2144  C   PHE A 341      29.055  17.226  30.237  1.00 21.84      A
ATOM   2145  O   PHE A 341      28.232  16.896  29.389  1.00 20.37      A
ATOM   2146  N   PHE A 342      30.034  16.422  30.640  1.00 20.51      A
ATOM   2147  CA  PHE A 342      30.221  15.085  30.077  1.00 23.01      A
ATOM   2148  CB  PHE A 342      31.710  14.809  29.850  1.00 18.00      A
ATOM   2149  CG  PHE A 342      32.398  15.812  28.971  1.00 17.05      A
ATOM   2150  CD1 PHE A 342      32.010  15.987  27.652  1.00 17.78      A
ATOM   2151  CD2 PHE A 342      33.487  16.534  29.450  1.00 15.72      A
ATOM   2152  CE1 PHE A 342      32.702  16.867  26.811  1.00 18.08      A
ATOM   2153  CE2 PHE A 342      34.184  17.414  28.617  1.00 17.45      A
ATOM   2154  CZ  PHE A 342      33.790  17.578  27.298  1.00 16.56      A
ATOM   2155  C   PHE A 342      29.679  13.972  30.976  1.00 24.95      A
ATOM   2156  O   PHE A 342      30.002  12.798  30.777  1.00 23.95      A
ATOM   2157  N   GLU A 343      28.861  14.333  31.958  1.00 27.35      A
ATOM   2158  CA  GLU A 343      28.325  13.349  32.897  1.00 30.28      A
ATOM   2159  CB  GLU A 343      27.187  13.964  33.716  1.00 32.20      A
ATOM   2160  CG  GLU A 343      26.581  12.991  34.714  1.00 39.71      A
ATOM   2161  CD  GLU A 343      25.628  13.661  35.688  1.00 44.72      A
ATOM   2162  OE1 GLU A 343      24.661  14.314  35.234  1.00 47.55      A
ATOM   2163  OE2 GLU A 343      25.847  13.526  36.911  1.00 46.89      A
ATOM   2164  C   GLU A 343      27.852  12.017  32.305  1.00 28.98      A
ATOM   2165  O   GLU A 343      28.225  10.952  32.800  1.00 31.73      A
ATOM   2166  N   SER A 344      27.037  12.067  31.258  1.00 26.09      A
ATOM   2167  CA  SER A 344      26.520  10.838  30.656  1.00 28.36      A
ATOM   2168  CB  SER A 344      25.129  11.089  30.067  1.00 28.73      A
ATOM   2169  OG  SER A 344      25.203  11.942  28.940  1.00 30.91      A
ATOM   2170  C   SER A 344      27.407  10.214  29.577  1.00 27.66      A
ATOM   2171  O   SER A 344      26.987   9.281  28.900  1.00 28.66      A
ATOM   2172  N   VAL A 345      28.627  10.715  29.419  1.00 26.75      A
ATOM   2173  CA  VAL A 345      29.534  10.183  28.402  1.00 23.44      A
ATOM   2174  CB  VAL A 345      30.565  11.256  27.950  1.00 23.10      A
ATOM   2175  CG1 VAL A 345      31.589  10.631  26.995  1.00 22.24      A
ATOM   2176  CG2 VAL A 345      29.854  12.418  27.275  1.00 20.05      A
ATOM   2177  C   VAL A 345      30.326   8.957  28.855  1.00 24.26      A
ATOM   2178  O   VAL A 345      30.876   8.930  29.960  1.00 22.83      A
ATOM   2179  N   THR A 346      30.374   7.942  27.997  1.00 21.77      A
ATOM   2180  CA  THR A 346      31.153   6.740  28.272  1.00 23.70      A
ATOM   2181  CB  THR A 346      30.391   5.455  27.857  1.00 26.53      A
ATOM   2182  OG1 THR A 346      29.248   5.284  28.706  1.00 29.98      A
ATOM   2183  CG2 THR A 346      31.289   4.231  27.990  1.00 24.28      A
ATOM   2184  C   THR A 346      32.383   6.945  27.385  1.00 23.43      A
ATOM   2185  O   THR A 346      32.306   6.827  26.160  1.00 24.50      A
ATOM   2186  N   TRP A 347      33.508   7.270  28.013  1.00 22.98      A
ATOM   2187  CA  TRP A 347      34.744   7.569  27.300  1.00 23.81      A
ATOM   2188  CB  TRP A 347      35.683   8.352  28.219  1.00 22.54      A
ATOM   2189  CG  TRP A 347      35.128   9.658  28.693  1.00 20.61      A
ATOM   2190  CD2 TRP A 347      35.257  10.927  28.040  1.00 19.11      A
ATOM   2191  CE2 TRP A 347      34.581  11.881  28.838  1.00 18.39      A
ATOM   2192  CE3 TRP A 347      35.878  11.351  26.858  1.00 18.16      A
ATOM   2193  CD1 TRP A 347      34.397   9.883  29.828  1.00 18.35      A
ATOM   2194  NE1 TRP A 347      34.065  11.218  29.923  1.00 19.51      A
ATOM   2195  CZ2 TRP A 347      34.510  13.234  28.491  1.00 16.88      A
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ATOM   2196  CZ3 TRP A 347      35.808  12.701  26.511  1.00 17.23      A
ATOM   2197  CH2 TRP A 347      35.127  13.624  27.327  1.00 18.16      A
ATOM   2198  C   TRP A 347      35.538   6.429  26.675  1.00 25.79      A
ATOM   2199  O   TRP A 347      36.304   6.654  25.742  1.00 24.67      A
ATOM   2200  N   ALA A 348      35.360   5.215  27.183  1.00 27.10      A
ATOM   2201  CA  ALA A 348      36.116   4.063  26.697  1.00 27.46      A
ATOM   2202  CB  ALA A 348      35.899   2.869  27.636  1.00 27.09      A
ATOM   2203  C   ALA A 348      35.895   3.620  25.256  1.00 27.18      A
ATOM   2204  O   ALA A 348      36.830   3.148  24.613  1.00 29.41      A
ATOM   2205  N   ASN A 349      34.682   3.769  24.735  1.00 26.55      A
ATOM   2206  CA  ASN A 349      34.418   3.310  23.375  1.00 27.28      A
ATOM   2207  CB  ASN A 349      33.700   1.962  23.444  1.00 29.37      A
ATOM   2208  CG  ASN A 349      32.299   2.088  24.013  1.00 30.92      A
ATOM   2209  OD1 ASN A 349      32.045   2.942  24.859  1.00 30.17      A
ATOM   2210  ND2 ASN A 349      31.386   1.237  23.553  1.00 33.52      A
ATOM   2211  C   ASN A 349      33.599   4.265  22.509  1.00 26.47      A
ATOM   2212  O   ASN A 349      32.669   3.843  21.819  1.00 25.87      A
ATOM   2213  N   LEU A 350      33.947   5.543  22.518  1.00 24.45      A
ATOM   2214  CA  LEU A 350      33.203   6.510  21.721  1.00 23.14      A
ATOM   2215  CB  LEU A 350      33.837   7.898  21.848  1.00 23.22      A
ATOM   2216  CG  LEU A 350      33.659   8.605  23.191  1.00 21.05      A
ATOM   2217  CD1 LEU A 350      34.646   9.756  23.293  1.00 19.36      A
ATOM   2218  CD2 LEU A 350      32.220   9.094  23.319  1.00 18.78      A
ATOM   2219  C   LEU A 350      33.082   6.152  20.240  1.00 22.60      A
ATOM   2220  O   LEU A 350      32.011   6.296  19.650  1.00 21.15      A
ATOM   2221  N   HIS A 351      34.165   5.689  19.627  1.00 23.13      A
ATOM   2222  CA  HIS A 351      34.089   5.387  18.204  1.00 27.83      A
ATOM   2223  CB  HIS A 351      35.506   5.325  17.596  1.00 29.36      A
ATOM   2224  CG  HIS A 351      36.082   3.950  17.493  1.00 32.07      A
ATOM   2225  CD2 HIS A 351      36.611   3.128  18.431  1.00 32.39      A
ATOM   2226  ND1 HIS A 351      36.197   3.285  16.291  1.00 33.02      A
ATOM   2227  CE1 HIS A 351      36.775   2.113  16.493  1.00 33.58      A
ATOM   2228  NE2 HIS A 351      37.036   1.992  17.782  1.00 31.76      A
ATOM   2229  C   HIS A 351      33.258   4.144  17.874  1.00 28.12      A
ATOM   2230  O   HIS A 351      33.015   3.847  16.707  1.00 29.49      A
ATOM   2231  N   GLN A 352      32.800   3.442  18.908  1.00 29.28      A
ATOM   2232  CA  GLN A 352      31.963   2.255  18.726  1.00 29.67      A
ATOM   2233  CB  GLN   352      32.366   1.145  19.694  0.50 30.56      AC1
ATOM   2234  CG  GLN   352      33.169   0.041  19.041  0.50 30.88      AC1
ATOM   2235  CD  GLN   352      34.493  -0.186  19.729  0.50 31.21      AC1
ATOM   2236  OE1 GLN   352      34.541  -0.450  20.928  0.50 30.76      AC1
ATOM   2237  NE2 GLN   352      35.578  -0.084  18.971  0.50 32.30      AC1
ATOM   2238  C   GLN A 352      30.504   2.638  18.963  1.00 30.42      A
ATOM   2239  O   GLN A 352      29.595   1.831  18.770  1.00 29.01      A
ATOM   2240  N   GLN A 353      30.290   3.875  19.397  1.00 27.64      A
ATOM   2241  CA  GLN A 353      28.948   4.365  19.652  1.00 27.42      A
ATOM   2242  CB  GLN A 353      28.977   5.401  20.775  1.00 25.77      A
ATOM   2243  CG  GLN A 353      29.408   4.837  22.115  1.00 27.34      A
ATOM   2244  CD  GLN A 353      29.638   5.914  23.156  1.00 27.19      A
ATOM   2245  OE1 GLN A 353      28.875   6.872  23.252  1.00 28.29      A
ATOM   2246  NE2 GLN A 353      30.687   5.753  23.951  1.00 28.79      A
ATOM   2247  C   GLN A 353      28.375   4.989  18.385  1.00 29.00      A
ATOM   2248  O   GLN A 353      29.118   5.455  17.516  1.00 29.14      A
ATOM   2249  N   THR A 354      27.053   4.984  18.276  1.00 27.31      A
ATOM   2250  CA  THR A 354      26.390   5.568  17.119  1.00 27.85      A
ATOM   2251  CB  THR A 354      24.991   4.941  16.904  1.00 30.69      A
ATOM   2252  OG1 THR A 354      25.132   3.532  16.665  1.00 30.07      A
ATOM   2253  CG2 THR A 354      24.289   5.585  15.709  1.00 29.58      A
ATOM   2254  C   THR A 354      26.244   7.062  17.376  1.00 26.85      A
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ATOM   2255  O   THR A 354      25.592   7.475  18.329  1.00 25.77      A
ATOM   2256  N   PRO A 355      26.867   7.898  16.533  1.00 27.22      A
ATOM   2257  CD  PRO A 355      27.792   7.588  15.431  1.00 25.89      A
ATOM   2258  CA  PRO A 355      26.763   9.346  16.734  1.00 27.23      A
ATOM   2259  CB  PRO A 355      27.625   9.915  15.609  1.00 24.91      A
ATOM   2260  CG  PRO A 355      28.643   8.838  15.385  1.00 25.54      A
ATOM   2261  C   PRO A 355      25.322   9.837  16.641  1.00 28.07      A
ATOM   2262  O   PRO A 355      24.548   9.364  15.810  1.00 27.24      A
ATOM   2263  N   PRO A 356      24.941  10.792  17.500  1.00 28.28      A
ATOM   2264  CD  PRO A 356      25.752  11.560  18.462  1.00 28.31      A
ATOM   2265  CA  PRO A 356      23.572  11.306  17.448  1.00 28.44      A
ATOM   2266  CB  PRO A 356      23.539  12.301  18.604  1.00 28.11      A
ATOM   2267  CG  PRO A 356      24.946  12.832  18.612  1.00 26.86      A
ATOM   2268  C   PRO A 356      23.363  11.978  16.097  1.00 29.25      A
ATOM   2269  O   PRO A 356      24.304  12.537  15.529  1.00 27.27      A
ATOM   2270  N   ALA A 357      22.143  11.910  15.575  1.00 30.45      A
ATOM   2271  CA  ALA A 357      21.848  12.521  14.287  1.00 32.81      A
ATOM   2272  CB  ALA A 357      20.507  12.019  13.757  1.00 31.99      A
ATOM   2273  C   ALA A 357      21.824  14.035  14.448  1.00 35.05      A
ATOM   2274  O   ALA A 357      21.194  14.561  15.369  1.00 35.04      A
ATOM   2275  N   LEU A 358      22.516  14.730  13.552  1.00 37.81      A
ATOM   2276  CA  LEU A 358      22.578  16.185  13.597  1.00 42.15      A
ATOM   2277  CB  LEU A 358      23.679  16.681  12.658  1.00 39.54      A
ATOM   2278  CG  LEU A 358      25.086  16.285  13.109  1.00 39.51      A
ATOM   2279  CD1 LEU A 358      26.102  16.686  12.062  1.00 39.29      A
ATOM   2280  CD2 LEU A 358      25.395  16.953  14.445  1.00 40.01      A
ATOM   2281  C   LEU A 358      21.241  16.837  13.242  1.00 45.91      A
ATOM   2282  O   LEU A 358      20.874  16.927  12.069  1.00 45.71      A
ATOM   2283  N   THR A 359      20.530  17.290  14.275  1.00 50.06      A
ATOM   2284  CA  THR A 359      19.223  17.939  14.140  1.00 53.73      A
ATOM   2285  CB  THR A 359      19.353  19.428  13.726  1.00 54.04      A
ATOM   2286  OG1 THR A 359      19.995  19.521  12.448  1.00 56.35      A
ATOM   2287  CG2 THR A 359      20.158  20.204  14.763  1.00 54.32      A
ATOM   2288  C   THR A 359      18.309  17.236  13.139  1.00 54.47      A
ATOM   2289  O   THR A 359      18.483  16.016  12.930  1.00 55.90      A
ATOM   2290  OXT THR A 359      17.407  17.908  12.595  1.00 56.97      A
ATOM   2291  OH2 TIP S   1      42.566  19.118  34.302  1.00 15.09      S
ATOM   2292  OH2 TIP S   2      41.052  32.378  19.857  1.00 15.82      S
ATOM   2293  OH2 TIP S   3      37.014  33.030  17.747  1.00 16.95      S
ATOM   2294  OH2 TIP S   5      45.353  24.370  18.152  1.00 16.85      S
ATOM   2295  OH2 TIP S   6      31.896  13.930  33.235  1.00 20.42      S
ATOM   2296  OH2 TIP S   7      50.351  22.781  28.249  1.00 21.14      S
ATOM   2297  OH2 TIP S   8      45.246  -0.589  -0.734  1.00 17.74      S
ATOM   2298  OH2 TIP S  11      46.249  -0.348  -8.523  1.00 21.32      S
ATOM   2299  OH2 TIP S  14      45.756  11.148  29.680  1.00 21.94      S
ATOM   2300  OH2 TIP S  15      44.273  13.157  34.592  1.00 15.61      S
ATOM   2301  OH2 TIP S  17      53.598   3.722  -1.720  1.00 21.45      S
ATOM   2302  OH2 TIP S  18      46.049  13.087  31.565  1.00 20.35      S
ATOM   2303  OH2 TIP S  19      53.422  22.401  -3.280  1.00 23.26      S
ATOM   2304  OH2 TIP S  20      34.587   7.922   5.383  1.00 22.58      S
ATOM   2305  OH2 TIP S  21      45.053  27.379  19.376  1.00 29.60      S
ATOM   2306  OH2 TIP S  23      28.899  36.416  28.633  1.00 31.68      S
ATOM   2307  OH2 TIP S  24      35.531  11.645  -8.219  1.00 23.45      S
ATOM   2308  OH2 TIP S  25      47.364  28.787  19.612  1.00 23.03      S
ATOM   2309  OH2 TIP S  27      48.859  21.588  12.634  1.00 23.76      S
ATOM   2310  OH2 TIP S  29      48.805   8.920  23.626  1.00 22.23      S
ATOM   2311  OH2 TIP S  31      48.619   7.247  10.112  1.00 21.32      S
ATOM   2312  OH2 TIP S  34      44.824  28.720  15.621  1.00 25.27      S
ATOM   2313  OH2 TIP S  35      26.030  12.634  13.407  1.00 21.61      S
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	ATOM	2314	OH2	TIP	S	36	50.462	19.810	40.066	1.00	25.45	S
	ATOM	2315	OH2	TIP	S	37	39.631	23.510	-0.239	1.00	30.88	S
	ATOM	2316	OH2	TIP	S	40	44.734	42.655	10.346	1.00	30.84	S
	ATOM	2317	OH2	TIP	S	41	54.653	3.902	1.503	1.00	27.14	S
5	ATOM	2318	OH2	TIP	S	45	45.693	21.923	39.754	1.00	28.30	S
	ATOM	2319	OH2	TIP	S	47	47.820	16.413	7.805	1.00	25.73	S
	ATOM	2320	OH2	TIP	S	48	50.292	31.412	29.642	1.00	32.79	S
	ATOM	2321	OH2	TIP	S	49	26.056	16.646	34.827	1.00	29.80	S
	ATOM	2322	OH2	TIP	S	52	31.714	10.996	31.855	1.00	29.15	S
10	ATOM	2323	OH2	TIP	S	53	46.108	23.843	-4.299	1.00	24.21	S
	ATOM	2324	OH2	TIP	S	54	37.645	11.206	34.448	1.00	28.56	S
	ATOM	2325	OH2	TIP	S	55	26.371	28.513	12.142	1.00	32.08	S
	ATOM	2326	OH2	TIP	S	58	33.564	19.700	3.483	1.00	28.28	S
	ATOM	2327	OH2	TIP	S	64	48.295	-0.632	14.280	1.00	32.13	S
15	ATOM	2328	OH2	TIP	S	65	40.064	26.036	34.324	1.00	24.17	S
	ATOM	2329	OH2	TIP	S	66	29.570	3.958	14.729	1.00	28.94	S
	ATOM	2330	OH2	TIP	S	72	60.085	11.604	6.814	1.00	38.35	S
	ATOM	2331	OH2	TIP	S	73	39.203	44.403	18.686	1.00	26.61	S
	ATOM	2332	OH2	TIP	S	76	47.312	12.366	27.366	1.00	28.51	S
20	ATOM	2333	OH2	TIP	S	80	43.862	33.771	33.329	1.00	28.82	S
	ATOM	2334	OH2	TIP	S	81	57.890	13.106	2.128	1.00	40.62	S
	ATOM	2335	OH2	TIP	S	82	41.663	34.381	32.043	1.00	19.35	S
	ATOM	2336	OH2	TIP	S	85	50.974	40.331	19.200	1.00	21.14	S
	ATOM	2337	OH2	TIP	S	88	47.925	-0.832	-6.556	1.00	24.11	S
25	ATOM	2338	OH2	TIP	S	90	27.231	28.336	33.481	1.00	27.64	S
	ATOM	2339	OH2	TIP	S	91	43.651	-7.101	-7.995	1.00	24.33	S
	ATOM	2340	OH2	TIP	S	92	49.325	4.387	19.370	1.00	28.02	S
	ATOM	2341	OH2	TIP	S	93	46.231	11.549	33.898	1.00	29.40	S
	ATOM	2342	OH2	TIP	S	94	63.889	24.831	1.168	1.00	26.53	S
30	ATOM	2343	OH2	TIP	S	96	56.396	4.952	-6.749	1.00	28.00	S
	ATOM	2344	OH2	TIP	S	98	35.510	27.986	11.558	1.00	29.24	S
	ATOM	2345	OH2	TIP	S	100	49.942	24.366	30.265	1.00	31.61	S
	ATOM	2346	OH2	TIP	S	101	56.121	7.113	-8.298	1.00	31.57	S
	ATOM	2347	OH2	TIP	S	102	58.318	19.957	-8.378	1.00	26.95	S
35	ATOM	2348	OH2	TIP	S	103	49.647	22.446	39.624	1.00	40.57	S
	ATOM	2349	OH2	TIP	S	104	45.359	7.052	13.052	1.00	26.27	S
	ATOM	2350	OH2	TIP	S	105	37.150	32.340	32.346	1.00	34.45	S
	ATOM	2351	OH2	TIP	S	107	43.465	40.457	8.240	1.00	40.48	S
	ATOM	2352	OH2	TIP	S	119	36.644	8.257	13.418	1.00	30.70	S
40	ATOM	2353	OH2	TIP	S	123	41.912	-8.974	-8.264	1.00	26.08	S
	ATOM	2354	OH2	TIP	S	124	62.424	15.800	-7.411	1.00	24.08	S
	ATOM	2355	OH2	TIP	S	126	37.266	18.656	-9.097	1.00	28.99	S
	ATOM	2356	OH2	TIP	S	127	43.129	26.845	14.606	1.00	25.19	S
	ATOM	2357	OH2	TIP	S	128	36.339	32.639	29.802	1.00	29.25	S
45	ATOM	2358	OH2	TIP	S	130	54.051	14.561	26.498	1.00	33.93	S
	ATOM	2359	OH2	TIP	S	131	41.805	-4.242	5.492	1.00	33.72	S
	ATOM	2360	OH2	TIP	S	133	38.873	25.163	36.697	1.00	30.69	S
	ATOM	2361	OH2	TIP	S	134	28.777	8.553	25.307	1.00	31.43	S
	ATOM	2362	OH2	TIP	S	135	53.672	10.546	-12.803	1.00	33.45	S
50	ATOM	2363	OH2	TIP	S	136	59.892	15.434	11.467	1.00	31.39	S
	ATOM	2364	OH2	TIP	S	137	31.040	12.361	35.470	1.00	34.07	S
	ATOM	2365	OH2	TIP	S	139	33.489	14.292	-0.598	1.00	40.68	S
	ATOM	2366	OH2	TIP	S	140	46.918	8.748	11.662	1.00	29.23	S
	ATOM	2367	OH2	TIP	S	141	46.297	-7.287	-9.196	1.00	42.20	S
55	ATOM	2368	OH2	TIP	S	142	58.193	6.715	-4.685	1.00	35.48	S
	ATOM	2369	OH2	TIP	S	143	44.598	4.435	12.503	1.00	27.68	S
	ATOM	2370	OH2	TIP	S	144	27.003	5.999	12.450	1.00	36.30	S
	ATOM	2371	OH2	TIP	S	145	43.676	32.852	35.735	1.00	35.70	S
	ATOM	2372	OH2	TIP	S	146	35.783	18.628	36.452	1.00	34.62	S

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ATOM   2373  OH2 TIP S 147      25.402   4.058  20.638  1.00 45.03      S
ATOM   2374  OH2 TIP S 148      45.839  35.853  33.724  1.00 35.47      S
ATOM   2375  OH2 TIP S 149      22.176  18.976  16.752  1.00 31.87      S
ATOM   2376  OH2 TIP S 150      43.986  33.179  10.162  1.00 37.70      S
ATOM   2377  OH2 TIP S 151      50.653  20.347  42.428  1.00 35.80      S
ATOM   2378  OH2 TIP S 152      47.843  24.314   9.506  1.00 31.05      S
ATOM   2379  OH2 TIP S 153      44.693   5.273 -14.175  1.00 29.90      S
ATOM   2380  OH2 TIP S 155      26.560  36.851  31.684  1.00 49.29      S
ATOM   2381  OH2 TIP S 156      46.867   8.019 -12.951  1.00 29.21      S
ATOM   2382  OH2 TIP S 157      30.432  28.741  12.438  1.00 37.76      S
ATOM   2383  OH2 TIP S 158      41.004  20.553   6.423  1.00 39.53      S
ATOM   2384  OH2 TIP S 159      49.258  20.069  29.294  1.00 33.97      S
ATOM   2385  OH2 TIP S 160      48.082  28.459  16.489  1.00 33.10      S
ATOM   2386  OH2 TIP S 161      47.448  18.625  27.683  1.00 34.87      S
ATOM   2387  OH2 TIP S 162      19.687  20.632  23.411  1.00 35.01      S
ATOM   2388  OH2 TIP S 163      32.402  -1.266  22.443  1.00 37.26      S
ATOM   2389  OH2 TIP S 164      39.475  33.468  33.237  1.00 35.34      S
ATOM   2390  OH2 TIP S 165      44.277  18.950   5.162  1.00 45.14      S
ATOM   2391  OH2 TIP S 166      34.797  30.523  10.736  1.00 47.55      S
ATOM   2392  OH2 TIP S 167      46.541   3.526 -14.949  1.00 26.54      S
ATOM   2393  OH2 TIP S 168      36.333  16.371   1.539  1.00 38.68      S
ATOM   2394  OH2 TIP S 169      46.761  38.936  27.403  1.00 34.66      S
ATOM   2395  OH2 TIP S 170      24.163  13.264  11.375  1.00 41.23      S
ATOM   2396  OH2 TIP S 171      48.459  15.018  31.951  1.00 38.11      S
ATOM   2397  OH2 TIP S 172      34.261  23.193  40.004  1.00 48.96      S
ATOM   2398  OH2 TIP S 173      45.924  -0.026  13.224  1.00 39.55      S
ATOM   2399  OH2 TIP S 175      41.384  37.389  32.543  1.00 40.74      S
ATOM   2400  OH2 TIP S 177      49.394  35.312  27.150  1.00 44.33      S
ATOM   2401  OH2 TIP S 178      29.066  29.942  34.359  1.00 41.46      S
ATOM   2402  OH2 TIP S 180      49.354  19.467   7.273  1.00 34.56      S
ATOM   2403  OH2 TIP S 181      25.298  17.029  31.863  1.00 47.74      S
ATOM   2404  OH2 TIP S 182      37.071  25.027   4.669  1.00 43.87      S
ATOM   2405  OH2 TIP S 183      22.581   7.487  18.691  1.00 41.75      S
ATOM   2406  OH2 TIP S 184      32.269   7.011  -1.891  1.00 48.84      S
ATOM   2407  OH2 TIP S 185      48.234   0.494   6.833  1.00 48.16      S
ATOM   2408  OH2 TIP S 187      20.008  14.658  19.211  1.00 45.27      S
ATOM   2409  OH2 TIP S 188      49.341  22.698  42.272  1.00 42.20      S
ATOM   2410  OH2 TIP S 190      61.292  18.260  -8.097  1.00 45.21      S
ATOM   2411  OH2 TIP S 191      28.152  10.606   2.819  1.00 40.38      S
ATOM   2412  OH2 TIP S 192      25.626  12.619  23.191  1.00 34.27      S
ATOM   2413  OH2 TIP S 193      59.876  11.603   1.216  1.00 46.54      S
ATOM   2414  OH2 TIP S 194      57.592  21.183 -10.646  1.00 45.82      S
ATOM   2415  OH2 TIP S 195      31.509  36.649  21.499  1.00 38.73      S
ATOM   2416  OH2 TIP S 197      50.270  -1.543  -6.136  1.00 42.66      S
ATOM   2417  OH2 TIP S 198      24.467   8.729  13.088  1.00 42.78      S
ATOM   2418  OH2 TIP S 199      38.098   8.699  25.759  1.00 32.80      S
ATOM   2419  OH2 TIP S 200      57.831  11.358 -13.255  1.00 45.31      S
ATOM   2420  OH2 TIP S 201      23.888  22.328  30.524  1.00 37.12      S
ATOM   2421  OH2 TIP S 202      47.691  26.068  37.666  1.00 37.92      S
ATOM   2422  OH2 TIP S 203      38.653   7.070  29.307  1.00 50.54      S
ATOM   2423  OH2 TIP S 206      44.424  27.583   2.092  1.00 53.50      S
ATOM   2424  OH2 TIP S 212      22.258   2.296  17.948  1.00 47.38      S
ATOM   2425  OH2 TIP S 214      19.843  17.943  23.303  1.00 30.36      S
ATOM   2426  OH2 TIP S 216      27.647  11.344  24.681  1.00 31.32      S
ATOM   2427  OH2 TIP S 217      37.953   7.817  -9.284  1.00 45.97      S
ATOM   2428  OH2 TIP S 218      33.845  34.040  12.124  1.00 38.11      S
ATOM   2429  OH2 TIP S 219      58.484  15.269  13.717  1.00 38.26      S
ATOM   2430  OH2 TIP S 220      48.526  40.920  26.583  1.00 35.23      S
ATOM   2431  OH2 TIP S 222      52.094  21.184  38.122  1.00 29.86      S
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ATOM   2432  OH2 TIP S 223      36.889   5.881   3.281  1.00 37.63      S
ATOM   2433  OH2 TIP S 224      47.642  -1.401 -10.684  1.00 34.89      S
ATOM   2434  OH2 TIP S 226      47.284   2.916  19.133  1.00 34.10      S
ATOM   2435  OH2 TIP S 227      42.468   4.463 -15.039  1.00 37.98      S
ATOM   2436  OH2 TIP S 228      19.169  22.832  21.831  1.00 41.57      S
ATOM   2437  OH2 TIP S 231      57.592  12.689  14.880  1.00 50.22      S
ATOM   2438  OH2 TIP S 232      27.102   9.176   5.655  1.00 40.57      S
ATOM   2439  OH2 TIP S 233      58.618   9.072 -11.925  1.00 50.71      S
ATOM   2440  OH2 TIP S 234      22.822  25.342  19.945  1.00 34.93      S
ATOM   2441  OH2 TIP S 236      24.831  32.218  28.901  1.00 37.69      S
ATOM   2442  OH2 TIP S 237      20.045  10.774  16.992  1.00 39.57      S
ATOM   2443  OH2 TIP S 238      58.019  19.850  15.679  1.00 41.42      S
ATOM   2444  OH2 TIP S 239      19.490  20.949  26.114  1.00 34.55      S
ATOM   2445  OH2 TIP S 240      61.187  26.377   7.346  1.00 39.68      S
ATOM   2446  OH2 TIP S 241      33.680  38.342  19.389  1.00 48.93      S
ATOM   2447  OH2 TIP S 242      51.539  31.612  10.881  1.00 55.65      S
ATOM   2448  OH2 TIP S 244      25.872  14.431  30.404  1.00 46.69      S
ATOM   2449  OH2 TIP S 248      37.332   5.849   9.544  1.00 43.81      S
ATOM   2450  OH2 TIP S 250      39.087  -1.293  -9.655  1.00 42.96      S
ATOM   2451  OH2 TIP S 258      23.938  30.000  30.010  1.00 38.89      S
ATOM   2452  OH2 TIP S 259      24.949  29.749  32.578  1.00 40.17      S
ATOM   2453  OH2 TIP S 260      32.111  17.986   1.918  1.00 48.36      S
ATOM   2454  OH2 TIP S 266      21.404  12.876  25.603  1.00 57.17      S
ATOM   2455  OH2 TIP S 269      35.425  36.767  12.550  1.00 30.70      S
ATOM   2456  OH2 TIP S 270      52.438  25.529  30.131  1.00 44.85      S
ATOM   2457  OH2 TIP S 271      53.299  20.156  36.003  1.00 37.15      S
ATOM   2458  OH2 TIP S 272      50.914   6.919  23.723  1.00 43.29      S
ATOM   2459  OH2 TIP S 274      31.578  30.795  11.014  1.00 50.15      S
ATOM   2460  OH2 TIP S 275      26.341   7.243  22.447  1.00 39.40      S
ATOM   2461  OH2 TIP S 276      60.392  18.195  10.235  1.00 37.91      S
ATOM   2462  OH2 TIP S 277      47.355  -9.081 -10.821  1.00 48.18      S
ATOM   2463  OH2 TIP S 279      41.304   6.175 -16.647  1.00 38.12      S
ATOM   2464  OH2 TIP S 282      33.299  21.620  37.881  1.00 46.29      S
ATOM   2465  OH2 TIP S 283      56.469  26.112  -8.575  1.00 43.71      S
ATOM   2466  OH2 TIP S 287      48.382  26.573   7.246  1.00 41.43      S
ATOM   2467  OH2 TIP S 288      56.240   7.245 -11.331  1.00 41.79      S
ATOM   2468  OH2 TIP S 290      49.060  14.978  28.166  1.00 37.03      S
ATOM   2469  OH2 TIP S 291      37.095  44.270  26.442  1.00 45.08      S
ATOM   2470  OH2 TIP S 292      47.814  -0.384 -13.299  1.00 48.60      S
ATOM   2471  OH2 TIP S 297      58.081   2.784  -7.841  1.00 41.89      S
ATOM   2472  OH2 TIP S 298      36.447  45.321  18.644  1.00 54.91      S
ATOM   2473  OH2 TIP S 299      49.029  23.328   1.767  1.00 30.55      S
ATOM   2474  OH2 TIP S 301      24.375  13.771   8.634  1.00 48.47      S
ATOM   2475  OH2 TIP S 303      47.904  36.798  28.653  1.00 35.76      S
ATOM   2476  OH2 TIP S 305      51.156  40.821  27.172  1.00 43.59      S
ATOM   2477  OH2 TIP S 306      32.943  28.917  35.227  1.00 42.60      S
ATOM   2478  OH2 TIP S 307      58.462  28.373   6.251  1.00 46.15      S
ATOM   2479  OH2 TIP S 308      41.964  30.940  36.712  1.00 48.26      S
ATOM   2480  OH2 TIP S 313      51.176  -1.922  -3.336  1.00 50.61      S
ATOM   2481  OH2 TIP S1001     21.319  36.868  23.805  1.00 36.97      S
ATOM   2482  OH2 TIP S1002     48.880  32.620  27.617  1.00 44.40      S
ATOM   2483  OH2 TIP S1003     61.880  19.473  11.767  1.00 45.49      S
ATOM   2484  OH2 TIP S1004     52.770  21.424  26.815  1.00 24.43      S
ATOM   2485  OH2 TIP S1005     35.373  29.094  36.197  1.00 35.97      S
ATOM   2486  OH2 TIP S1006     40.815  -6.636   4.389  1.00 43.15      S
ATOM   2487  OH2 TIP S1007     44.953   1.286  11.272  1.00 49.45      S
ATOM   2488  OH2 TIP S1010     21.004  16.168  27.009  1.00 48.51      S
ATOM   2489  OH2 TIP S1011     47.094  41.786   9.243  1.00 50.10      S
ATOM   2490  OH2 TIP S1012     32.479   2.978  14.158  1.00 49.47      S
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ATOM   2491  O12 GLC G   1      48.557  11.372 -12.279  1.00 40.72      G
ATOM   2492  C11 GLC G   1      48.836  12.133 -11.097  1.00 38.05      G
ATOM   2493  C13 GLC G   1      49.266  13.554 -11.476  1.00 38.09      G
ATOM   2494  O14 GLC G   1      49.559  14.299 -10.292  1.00 33.99      G
ATOM   2495  C15 GLC G   1      48.150  14.257 -12.257  1.00 37.32      G
ATOM   2496  O16 GLC G   1      48.574  15.582 -12.604  1.00 36.74      G
ATOM   2497  O12 GLC G   2      40.114  -6.634  -6.562  1.00 33.52      G
ATOM   2498  C11 GLC G   2      38.967  -6.592  -7.404  1.00 31.05      G
ATOM   2499  C13 GLC G   2      37.712  -6.417  -6.552  1.00 31.56      G
ATOM   2500  O14 GLC G   2      36.554  -6.406  -7.389  1.00 30.70      G
ATOM   2501  C15 GLC G   2      37.792  -5.109  -5.761  1.00 30.03      G
ATOM   2502  O16 GLC G   2      36.609  -4.961  -4.975  1.00 29.66      G
ATOM   2503  O12 GLC G   3      44.030   8.243 -13.470  1.00 37.90      G
ATOM   2504  C11 GLC G   3      43.950   9.648 -13.690  1.00 38.47      G
ATOM   2505  C13 GLC G   3      42.747   9.974 -14.579  1.00 39.52      G
ATOM   2506  O14 GLC G   3      41.551   9.526 -13.942  1.00 39.39      G
ATOM   2507  C15 GLC G   3      42.878   9.280 -15.934  1.00 41.43      G
ATOM   2508  O16 GLC G   3      41.736   9.613 -16.731  1.00 40.78      G
ATOM   2509  O12 GLC G   5      40.556   1.005   2.289  1.00 45.25      G
ATOM   2510  C11 GLC G   5      40.966   2.332   1.960  1.00 40.56      G
ATOM   2511  C13 GLC G   5      40.187   3.327   2.814  1.00 40.36      G
ATOM   2512  O14 GLC G   5      38.791   3.169   2.572  1.00 40.71      G
ATOM   2513  C15 GLC G   5      40.619   4.751   2.464  1.00 40.04      G
ATOM   2514  O16 GLC G   5      39.885   5.681   3.256  1.00 36.89      G
ATOM   2515  O12 GLC G   6      36.951  22.702  40.046  1.00 63.04      G
ATOM   2516  C11 GLC G   6      37.592  21.583  39.422  1.00 62.46      G
ATOM   2517  C13 GLC G   6      38.104  21.978  38.030  1.00 61.14      G
ATOM   2518  O14 GLC G   6      39.034  23.054  38.168  1.00 61.72      G
ATOM   2519  C15 GLC G   6      36.948  22.429  37.126  1.00 60.51      G
ATOM   2520  O16 GLC G   6      35.992  21.372  36.960  1.00 58.61      G
ATOM   2521  O12 GLC G   7      37.316   0.281  14.299  1.00 73.45      G
ATOM   2522  C11 GLC G   7      37.655  -0.758  15.222  1.00 72.78      G
ATOM   2523  C13 GLC G   7      36.592  -1.856  15.157  1.00 72.98      G
ATOM   2524  O14 GLC G   7      35.320  -1.299  15.498  1.00 73.88      G
ATOM   2525  C15 GLC G   7      36.924  -2.989  16.134  1.00 73.66      G
ATOM   2526  O16 GLC G   7      36.972  -2.493  17.478  1.00 75.38      G
ATOM   2527  O12 GLC G   8      51.921  21.898   5.908  1.00 62.51      G
ATOM   2528  C11 GLC G   8      52.447  20.871   5.063  1.00 63.42      G
ATOM   2529  C13 GLC G   8      51.476  20.597   3.908  1.00 64.28      G
ATOM   2530  O14 GLC G   8      51.297  21.794   3.150  1.00 66.28      G
ATOM   2531  C15 GLC G   8      50.121  20.137   4.448  1.00 64.49      G
ATOM   2532  O16 GLC G   8      49.233  19.886   3.357  1.00 64.01      G
ATOM   2533  O12 GLC G  10      36.044  37.499  29.523  1.00 56.89      G
ATOM   2534  C11 GLC G  10      35.164  36.645  30.259  1.00 56.97      G
ATOM   2535  C13 GLC G  10      33.849  36.489  29.494  1.00 56.11      G
ATOM   2536  O14 GLC G  10      33.248  37.772  29.308  1.00 56.44      G
ATOM   2537  C15 GLC G  10      32.900  35.580  30.277  1.00 55.84      G
ATOM   2538  O16 GLC G  10      31.674  35.442  29.557  1.00 55.39      G
ATOM   2539  O3G ATP N   1      46.280  25.658   5.170  1.00 51.49      N
ATOM   2540  PG  ATP N   1      46.464  25.053   3.691  1.00 52.22      N
ATOM   2541  O1G ATP N   1      47.406  23.911   3.763  1.00 51.41      N
ATOM   2542  O2G ATP N   1      46.794  26.182   2.784  1.00 52.07      N
ATOM   2543  O3B ATP N   1      44.976  24.513   3.344  1.00 51.01      N
ATOM   2544  PB  ATP N   1      44.560  22.969   3.605  1.00 50.20      N
ATOM   2545  O1B ATP N   1      43.083  22.898   3.669  1.00 49.41      N
ATOM   2546  O2B ATP N   1      45.345  22.474   4.766  1.00 50.34      N
ATOM   2547  O3A ATP N   1      45.070  22.231   2.255  1.00 47.77      N
ATOM   2548  PA  ATP N   1      45.075  20.613   2.121  1.00 42.84      N
ATOM   2549  O1A ATP N   1      45.547  20.291   0.754  1.00 43.81      N
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	ATOM	2550	O2A	ATP	N	1	45.807	20.035	3.270	1.00	45.03	N
	ATOM	2551	O5*	ATP	N	1	43.516	20.223	2.245	1.00	41.73	N
	ATOM	2552	C5*	ATP	N	1	42.528	20.925	1.489	1.00	37.57	N
	ATOM	2553	C4*	ATP	N	1	41.127	20.379	1.776	1.00	39.45	N
5	ATOM	2554	O4*	ATP	N	1	40.907	19.024	1.279	1.00	37.72	N
	ATOM	2555	C3*	ATP	N	1	40.777	20.321	3.251	1.00	38.48	N
	ATOM	2556	O3*	ATP	N	1	40.360	21.615	3.697	1.00	40.42	N
	ATOM	2557	C2*	ATP	N	1	39.608	19.374	3.270	1.00	37.58	N
	ATOM	2558	O2*	ATP	N	1	38.410	20.076	2.924	1.00	35.98	N
10	ATOM	2559	C1*	ATP	N	1	39.939	18.346	2.173	1.00	35.55	N
	ATOM	2560	N9	ATP	N	1	40.628	17.156	2.747	1.00	31.76	N
	ATOM	2561	C8	ATP	N	1	41.864	17.126	3.274	1.00	30.49	N
	ATOM	2562	N7	ATP	N	1	42.143	15.877	3.667	1.00	29.75	N
	ATOM	2563	C5	ATP	N	1	41.088	15.118	3.390	1.00	27.49	N
15	ATOM	2564	C4	ATP	N	1	40.125	15.925	2.810	1.00	30.02	N
	ATOM	2565	N3	ATP	N	1	38.937	15.389	2.431	1.00	27.11	N
	ATOM	2566	C2	ATP	N	1	38.679	14.085	2.615	1.00	25.62	N
	ATOM	2567	N1	ATP	N	1	39.597	13.283	3.175	1.00	21.76	N
	ATOM	2568	C6	ATP	N	1	40.800	13.768	3.571	1.00	23.90	N
20	ATOM	2569	N6	ATP	N	1	41.698	12.964	4.127	1.00	21.94	N
	ATOM	2570	S	SO4	I	1	58.680	8.493	-0.639	1.00	56.05	I
	ATOM	2571	O1	SO4	I	1	57.956	7.875	0.483	1.00	58.83	I
	ATOM	2572	O2	SO4	I	1	57.886	9.607	-1.188	1.00	57.04	I
	ATOM	2573	O3	SO4	I	1	58.906	7.478	-1.683	1.00	57.47	I
25	ATOM	2574	O4	SO4	I	1	59.976	9.008	-0.156	1.00	57.51	I
	ATOM	2575	S	SO4	I	2	39.339	4.855	7.057	1.00	84.24	I
	ATOM	2576	O1	SO4	I	2	39.390	6.175	7.711	1.00	85.02	I
	ATOM	2577	O2	SO4	I	2	40.101	4.897	5.797	1.00	84.75	I
	ATOM	2578	O3	SO4	I	2	37.936	4.506	6.766	1.00	84.94	I
30	ATOM	2579	O4	SO4	I	2	39.931	3.842	7.954	1.00	84.44	I
	ATOM	2580	S	SO4	I	3	38.987	-2.256	3.310	1.00	58.58	I
	ATOM	2581	O1	SO4	I	3	37.734	-1.675	3.827	1.00	59.11	I
	ATOM	2582	O2	SO4	I	3	39.460	-1.454	2.172	1.00	59.91	I
	ATOM	2583	O3	SO4	I	3	38.743	-3.640	2.866	1.00	60.97	I
35	ATOM	2584	O4	SO4	I	3	40.014	-2.260	4.369	1.00	59.58	I
	ATOM	2585	S	SO4	I	4	34.397	5.289	30.981	1.00	64.34	I
	ATOM	2586	O1	SO4	I	4	33.627	6.528	30.742	1.00	60.43	I
	ATOM	2587	O2	SO4	I	4	34.337	4.427	29.782	1.00	60.11	I
	ATOM	2588	O3	SO4	I	4	33.816	4.572	32.133	1.00	64.39	I
40	ATOM	2589	O4	SO4	I	4	35.806	5.626	31.277	1.00	63.55	I
	ATOM	2590	S	SO4	I	5	55.074	-6.984	-3.711	1.00	75.40	I
	ATOM	2591	O1	SO4	I	5	54.657	-7.518	-2.399	1.00	74.66	I
	ATOM	2592	O2	SO4	I	5	54.209	-5.845	-4.065	1.00	74.96	I
	ATOM	2593	O3	SO4	I	5	54.950	-8.034	-4.742	1.00	74.22	I
45	ATOM	2594	O4	SO4	I	5	56.477	-6.532	-3.633	1.00	75.15	I
	ATOM	2595	O2	PO4	P	100	57.362	24.998	13.149	1.00	66.76	P
	ATOM	2596	O3	PO4	P	100	59.399	26.166	13.761	1.00	66.89	P
	ATOM	2597	O4	PO4	P	100	57.761	25.606	15.462	1.00	67.43	P
	ATOM	2598	O1	PO4	P	100	57.264	27.325	13.818	1.00	65.91	P
50	ATOM	2599	P	PO4	P	100	57.947	26.025	14.048	1.00	66.69	P
	ATOM	2600	CB	GLU		80	50.411	3.975	-13.538	0.50	23.31	AC2
	ATOM	2601	CG	GLU		80	51.306	4.896	-14.362	0.50	24.09	AC2
	ATOM	2602	CD	GLU		80	52.180	5.798	-13.509	0.50	25.31	AC2
	ATOM	2603	OE1	GLU		80	52.841	5.289	-12.580	0.50	22.80	AC2
55	ATOM	2604	OE2	GLU		80	52.212	7.018	-13.774	0.50	28.07	AC2
	ATOM	2605	CB	SER		105	37.582	-1.281	-6.192	0.50	21.16	AC2
	ATOM	2606	OG	SER		105	37.127	-1.871	-4.988	0.50	20.42	AC2
	ATOM	2607	CB	ARG		116	59.520	22.977	-7.867	0.50	31.00	AC2
	ATOM	2608	CG	ARG		116	60.312	24.192	-8.323	0.50	32.50	AC2

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ATOM   2609  CD  ARG   116      60.266  24.349  -9.838  0.50 34.11      AC2
ATOM   2610  NE  ARG   116      61.045  25.499 -10.290  0.50 36.67      AC2
ATOM   2611  CZ  ARG   116      60.729  26.766 -10.035  0.50 37.26      AC2
ATOM   2612  NH1 ARG   116      59.642  27.053  -9.331  0.50 38.99      AC2
ATOM   2613  NH2 ARG   116      61.503  27.746 -10.479  0.50 37.83      AC2
ATOM   2614  CB  LEU   145      49.693   8.642   6.631  0.50 15.29      AC2
ATOM   2615  CG  LEU   145      50.783   8.664   5.552  0.50 14.29      AC2
ATOM   2616  CD1 LEU   145      50.264   9.373   4.305  0.50  8.20      AC2
ATOM   2617  CD2 LEU   145      52.030   9.361   6.087  0.50 10.66      AC2
ATOM   2618  CB  ARG   183      27.455  16.155  24.989  0.50 19.21      AC2
ATOM   2619  CG  ARG   183      28.077  15.397  26.147  0.50 18.46      AC2
ATOM   2620  CD  ARG   183      27.002  14.945  27.127  0.50 19.72      AC2
ATOM   2621  NE  ARG   183      26.016  14.086  26.478  0.50 18.79      AC2
ATOM   2622  CZ  ARG   183      24.703  14.279  26.539  0.50 18.52      AC2
ATOM   2623  NH1 ARG   183      24.213  15.305  27.221  0.50 15.35      AC2
ATOM   2624  NH2 ARG   183      23.881  13.445  25.915  0.50 17.55      AC2
ATOM   2625  CB  SER   191      38.479  10.847  23.036  0.50 16.57      AC2
ATOM   2626  OG  SER   191      37.418  10.765  23.973  0.50 18.62      AC2
ATOM   2627  CB  GLU   209      38.645  24.079   8.551  0.50 22.02      AC2
ATOM   2628  CG  GLU   209      37.769  25.296   8.263  0.50 23.40      AC2
ATOM   2629  CD  GLU   209      37.513  26.175   9.483  0.50 24.27      AC2
ATOM   2630  OE1 GLU   209      37.076  27.328   9.288  0.50 25.25      AC2
ATOM   2631  OE2 GLU   209      37.737  25.727  10.629  0.50 20.24      AC2
ATOM   2632  CB  GLN   247      38.598  32.546  14.790  0.50 18.71      AC2
ATOM   2633  CG  GLN   247      38.077  33.665  13.900  0.50 16.95      AC2
ATOM   2634  CD  GLN   247      38.614  33.598  12.479  0.50 19.13      AC2
ATOM   2635  OE1 GLN   247      39.763  33.221  12.246  0.50 17.24      AC2
ATOM   2636  NE2 GLN   247      37.780  33.979  11.520  0.50 19.88      AC2
ATOM   2637  CE  LYS   315      34.978  25.150  36.369  0.50 20.49      AC2
ATOM   2638  NZ  LYS   315      34.183  24.074  37.023  0.50 17.05      AC2
ATOM   2639  CB  GLN   352      32.365   1.170  19.731  0.50 31.10      AC2
ATOM   2640  CG  GLN   352      33.833   0.778  19.683  0.50 32.11      AC2
ATOM   2641  CD  GLN   352      34.190   0.027  18.419  0.50 33.04      AC2
ATOM   2642  OE1 GLN   352      33.906   0.485  17.314  0.50 34.87      AC2
ATOM   2643  NE2 GLN   352      34.819  -1.133  18.575  0.50 32.08      AC2
END
```

Example 3: Co-ordinates for the PDK1 fragment without alternate side chains.

```
REMARK coordinates from restrained individual B-factor refinement
REMARK refinement resolution: 25.0 - 2.0 A
REMARK starting r= 0.1972 free_r= 0.2220
REMARK final    r= 0.1954 free_r= 0.2224
REMARK B rmsd for bonded mainchain atoms=  1.501  target= 1.5
REMARK B rmsd for bonded sidechain atoms=  2.235  target= 2.0
REMARK B rmsd for angle mainchain atoms=  2.347  target= 2.0
REMARK B rmsd for angle sidechain atoms=  3.302  target= 2.5
REMARK rweight=  0.0900 (with wa= 1.29263)
REMARK target= mlf  steps= 30
REMARK sg= P3(2)21  a= 123.013  b= 123.013  c= 47.624  alpha= 90 beta= 90
gamma= 120
REMARK parameter file 1  : /dd1/david/projects/PDK1_new/CNS/prot.par
REMARK parameter file 2  : /dd1/david/projects/PDK1_new/CNS/atp.par
REMARK parameter file 3  : CNS_TOPPAR:water_rep.param
REMARK parameter file 4  : CNS_TOPPAR:ion.param
```

```
REMARK parameter file 5  : /dd1/david/projects/PDK1_new/CNS/glycerol.par
REMARK molecular structure file: ../generate/alternate.mtf
REMARK input coordinates: ../minimize/minimize.pdb
REMARK reflection file= ../../1/hkl/cns.hkl
REMARK ncs= none
REMARK B-correction resolution: 6.0 - 2.0
REMARK initial B-factor correction applied to fobs :
REMARK   B11=  -2.766 B22=  -2.766 B33=   5.532
REMARK   B12=  -0.375 B13=   0.000 B23=   0.000
REMARK B-factor correction applied to coordinate array B:    0.031
REMARK bulk solvent: density level= 0.378441 e/A^3, B-factor= 52.6885 A^2
REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
REMARK theoretical total number of refl. in resol. range:    28210 ( 100.0
% )
REMARK number of unobserved reflections (no entry or |F|=0):    568 (   2.0
% )
REMARK number of reflections rejected:                             0 (   0.0
% )
REMARK total number of reflections used:                       27642 (  98.0
% )
REMARK number of reflections in working set:                   27063 (  95.9
% )
REMARK number of reflections in test set:                        579 (   2.1
% )
CRYST1  123.013  123.013   47.624  90.00  90.00 120.00 P 32 2 1
REMARK FILENAME="bindividual.pdb"
REMARK DATE:16-Apr-2002  18:31:12       created by user: david
REMARK VERSION:1.0
ATOM      1  CB  PRO A  71      58.912  -7.251   8.216  1.00 67.78      A
ATOM      2  CG  PRO A  71      59.621  -6.941   9.534  1.00 69.16      A
ATOM      3  C   PRO A  71      59.493  -6.506   5.894  1.00 67.06      A
ATOM      4  O   PRO A  71      59.196  -5.318   5.766  1.00 66.66      A
ATOM      5  N   PRO A  71      60.984  -6.073   7.833  1.00 67.86      A
ATOM      6  CD  PRO A  71      60.554  -5.762   9.207  1.00 68.24      A
ATOM      7  CA  PRO A  71      60.040  -7.035   7.217  1.00 67.75      A
ATOM      8  N   PRO A  72      59.356  -7.385   4.890  1.00 66.32      A
ATOM      9  CD  PRO A  72      59.712  -8.816   4.898  1.00 67.17      A
ATOM     10  CA  PRO A  72      58.840  -6.986   3.578  1.00 65.61      A
ATOM     11  CB  PRO A  72      58.672  -8.321   2.858  1.00 66.47      A
ATOM     12  CG  PRO A  72      59.796  -9.133   3.419  1.00 67.57      A
ATOM     13  C   PRO A  72      57.527  -6.208   3.673  1.00 63.94      A
ATOM     14  O   PRO A  72      56.710  -6.451   4.561  1.00 64.11      A
ATOM     15  N   ALA A  73      57.341  -5.268   2.753  1.00 61.57      A
ATOM     16  CA  ALA A  73      56.133  -4.454   2.708  1.00 58.74      A
ATOM     17  CB  ALA A  73      56.438  -3.030   3.165  1.00 58.05      A
ATOM     18  C   ALA A  73      55.626  -4.448   1.271  1.00 56.78      A
ATOM     19  O   ALA A  73      56.347  -4.834   0.349  1.00 56.95      A
ATOM     20  N   PRO A  74      54.372  -4.024   1.057  1.00 54.15      A
ATOM     21  CD  PRO A  74      53.335  -3.610   2.018  1.00 53.31      A
ATOM     22  CA  PRO A  74      53.856  -4.003  -0.314  1.00 52.54      A
ATOM     23  CB  PRO A  74      52.474  -3.375  -0.148  1.00 52.86      A
ATOM     24  CG  PRO A  74      52.067  -3.824   1.226  1.00 52.88      A
ATOM     25  C   PRO A  74      54.772  -3.167  -1.204  1.00 50.08      A
ATOM     26  O   PRO A  74      55.559  -2.361  -0.708  1.00 49.96      A
ATOM     27  N   ALA A  75      54.680  -3.366  -2.514  1.00 47.58      A
ATOM     28  CA  ALA A  75      55.503  -2.602  -3.446  1.00 44.69      A
ATOM     29  CB  ALA A  75      55.312  -3.121  -4.870  1.00 46.14      A
ATOM     30  C   ALA A  75      55.100  -1.134  -3.371  1.00 41.55      A
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ATOM     31  O   ALA A  75      53.947  -0.813  -3.086  1.00 41.01      A
ATOM     32  N   LYS A  76      56.053  -0.245  -3.619  1.00 38.31      A
ATOM     33  CA  LYS A  76      55.781   1.184  -3.588  1.00 35.72      A
ATOM     34  CB  LYS A  76      57.053   1.957  -3.930  1.00 37.70      A
ATOM     35  CG  LYS A  76      57.123   3.356  -3.350  1.00 40.99      A
ATOM     36  CD  LYS A  76      57.262   3.316  -1.836  1.00 40.04      A
ATOM     37  CE  LYS A  76      57.511   4.705  -1.277  1.00 42.08      A
ATOM     38  NZ  LYS A  76      57.681   4.695   0.202  1.00 42.99      A
ATOM     39  C   LYS A  76      54.708   1.467  -4.638  1.00 32.65      A
ATOM     40  O   LYS A  76      54.814   1.005  -5.770  1.00 31.41      A
ATOM     41  N   LYS A  77      53.668   2.207  -4.270  1.00 28.59      A
ATOM     42  CA  LYS A  77      52.619   2.517  -5.232  1.00 25.72      A
ATOM     43  CB  LYS A  77      51.316   2.865  -4.509  1.00 26.22      A
ATOM     44  CG  LYS A  77      50.796   1.731  -3.631  1.00 27.15      A
ATOM     45  CD  LYS A  77      49.487   2.089  -2.967  1.00 26.80      A
ATOM     46  CE  LYS A  77      49.136   1.091  -1.870  1.00 27.31      A
ATOM     47  NZ  LYS A  77      48.998  -0.296  -2.380  1.00 27.17      A
ATOM     48  C   LYS A  77      53.053   3.668  -6.137  1.00 24.67      A
ATOM     49  O   LYS A  77      54.010   4.377  -5.829  1.00 21.60      A
ATOM     50  N   ARG A  78      52.351   3.838  -7.254  1.00 23.66      A
ATOM     51  CA  ARG A  78      52.662   4.897  -8.211  1.00 26.14      A
ATOM     52  CB  ARG A  78      53.574   4.344  -9.318  1.00 28.57      A
ATOM     53  CG  ARG A  78      53.017   3.139 -10.050  1.00 34.78      A
ATOM     54  CD  ARG A  78      54.092   2.465 -10.896  1.00 40.96      A
ATOM     55  NE  ARG A  78      53.560   1.364 -11.700  1.00 48.93      A
ATOM     56  CZ  ARG A  78      52.985   0.270 -11.203  1.00 52.58      A
ATOM     57  NH1 ARG A  78      52.860   0.113  -9.889  1.00 54.60      A
ATOM     58  NH2 ARG A  78      52.530  -0.672 -12.022  1.00 54.09      A
ATOM     59  C   ARG A  78      51.382   5.488  -8.803  1.00 23.76      A
ATOM     60  O   ARG A  78      50.311   4.888  -8.706  1.00 24.25      A
ATOM     61  N   PRO A  79      51.475   6.676  -9.428  1.00 21.76      A
ATOM     62  CD  PRO A  79      52.691   7.475  -9.668  1.00 20.82      A
ATOM     63  CA  PRO A  79      50.301   7.325 -10.021  1.00 21.96      A
ATOM     64  CB  PRO A  79      50.910   8.481 -10.816  1.00 22.27      A
ATOM     65  CG  PRO A  79      52.124   8.831 -10.014  1.00 22.12      A
ATOM     66  C   PRO A  79      49.446   6.413 -10.903  1.00 22.86      A
ATOM     67  O   PRO A  79      48.213   6.461 -10.842  1.00 20.52      A
ATOM     68  N   GLU A  80      50.103   5.586 -11.714  1.00 21.87      A
ATOM     69  CA  GLU A  80      49.403   4.685 -12.628  1.00 22.99      A
ATOM     70  CB  GLU A  80      50.393   3.994 -13.571  1.00 25.24      A
ATOM     71  CG  GLU A  80      51.230   2.907 -12.925  1.00 28.75      A
ATOM     72  CD  GLU A  80      52.157   2.224 -13.913  1.00 31.99      A
ATOM     73  OE1 GLU A  80      53.072   2.897 -14.433  1.00 34.34      A
ATOM     74  OE2 GLU A  80      51.969   1.015 -14.172  1.00 32.83      A
ATOM     75  C   GLU A  80      48.556   3.631 -11.912  1.00 22.09      A
ATOM     76  O   GLU A  80      47.692   3.013 -12.530  1.00 22.37      A
ATOM     77  N   ASP A  81      48.804   3.413 -10.622  1.00 19.97      A
ATOM     78  CA  ASP A  81      48.026   2.423  -9.874  1.00 19.93      A
ATOM     79  CB  ASP A  81      48.736   2.029  -8.571  1.00 21.19      A
ATOM     80  CG  ASP A  81      50.089   1.380  -8.807  1.00 22.46      A
ATOM     81  OD1 ASP A  81      50.195   0.554  -9.731  1.00 24.22      A
ATOM     82  OD2 ASP A  81      51.043   1.685  -8.058  1.00 23.33      A
ATOM     83  C   ASP A  81      46.652   2.975  -9.518  1.00 20.85      A
ATOM     84  O   ASP A  81      45.793   2.246  -9.015  1.00 19.96      A
ATOM     85  N   PHE A  82      46.445   4.258  -9.804  1.00 18.91      A
ATOM     86  CA  PHE A  82      45.200   4.934  -9.465  1.00 19.30      A
ATOM     87  CB  PHE A  82      45.475   6.027  -8.427  1.00 18.43      A
ATOM     88  CG  PHE A  82      46.134   5.531  -7.175  1.00 18.01      A
ATOM     89  CD1 PHE A  82      45.371   5.136  -6.084  1.00 17.19      A
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ATOM     90  CD2 PHE A  82      47.520   5.460  -7.086  1.00 18.99      A
ATOM     91  CE1 PHE A  82      45.977   4.676  -4.918  1.00 17.12      A
ATOM     92  CE2 PHE A  82      48.137   5.000  -5.925  1.00 19.64      A
ATOM     93  CZ  PHE A  82      47.361   4.607  -4.838  1.00 18.00      A
ATOM     94  C   PHE A  82      44.476   5.596 -10.621  1.00 20.81      A
ATOM     95  O   PHE A  82      45.066   5.933 -11.649  1.00 20.34      A
ATOM     96  N   LYS A  83      43.182   5.792 -10.411  1.00 19.80      A
ATOM     97  CA  LYS A  83      42.321   6.478 -11.353  1.00 21.65      A
ATOM     98  CB  LYS A  83      41.096   5.625 -11.687  1.00 22.02      A
ATOM     99  CG  LYS A  83      40.062   6.326 -12.550  1.00 28.93      A
ATOM    100  CD  LYS A  83      38.974   5.355 -12.981  1.00 34.20      A
ATOM    101  CE  LYS A  83      37.909   6.042 -13.824  1.00 38.10      A
ATOM    102  NZ  LYS A  83      37.179   7.086 -13.043  1.00 43.33      A
ATOM    103  C   LYS A  83      41.913   7.702 -10.541  1.00 20.74      A
ATOM    104  O   LYS A  83      41.084   7.606  -9.635  1.00 20.98      A
ATOM    105  N   PHE A  84      42.513   8.848 -10.835  1.00 19.99      A
ATOM    106  CA  PHE A  84      42.188  10.049 -10.083  1.00 18.63      A
ATOM    107  CB  PHE A  84      43.279  11.103 -10.258  1.00 18.95      A
ATOM    108  CG  PHE A  84      44.571  10.741  -9.587  1.00 17.68      A
ATOM    109  CD1 PHE A  84      45.498   9.926 -10.224  1.00 18.16      A
ATOM    110  CD2 PHE A  84      44.843  11.183  -8.299  1.00 19.66      A
ATOM    111  CE1 PHE A  84      46.676   9.556  -9.589  1.00 18.09      A
ATOM    112  CE2 PHE A  84      46.021  10.816  -7.653  1.00 18.89      A
ATOM    113  CZ  PHE A  84      46.936  10.002  -8.301  1.00 17.33      A
ATOM    114  C   PHE A  84      40.834  10.617 -10.460  1.00 19.69      A
ATOM    115  O   PHE A  84      40.391  10.489 -11.601  1.00 20.72      A
ATOM    116  N   GLY A  85      40.178  11.233  -9.484  1.00 16.80      A
ATOM    117  CA  GLY A  85      38.872  11.810  -9.716  1.00 17.73      A
ATOM    118  C   GLY A  85      38.819  13.280  -9.346  1.00 18.75      A
ATOM    119  O   GLY A  85      39.740  14.043  -9.650  1.00 18.45      A
ATOM    120  N   LYS A  86      37.753  13.673  -8.659  1.00 16.00      A
ATOM    121  CA  LYS A  86      37.571  15.064  -8.278  1.00 18.26      A
ATOM    122  CB  LYS A  86      36.133  15.302  -7.812  1.00 19.00      A
ATOM    123  CG  LYS A  86      35.793  14.660  -6.481  1.00 21.55      A
ATOM    124  CD  LYS A  86      34.368  14.981  -6.066  1.00 26.48      A
ATOM    125  CE  LYS A  86      33.994  14.239  -4.793  1.00 31.92      A
ATOM    126  NZ  LYS A  86      32.568  14.457  -4.412  1.00 35.36      A
ATOM    127  C   LYS A  86      38.523  15.571  -7.202  1.00 18.57      A
ATOM    128  O   LYS A  86      39.045  14.807  -6.385  1.00 16.77      A
ATOM    129  N   ILE A  87      38.737  16.881  -7.227  1.00 17.88      A
ATOM    130  CA  ILE A  87      39.577  17.554  -6.256  1.00 18.26      A
ATOM    131  CB  ILE A  87      39.994  18.952  -6.772  1.00 19.60      A
ATOM    132  CG2 ILE A  87      40.593  19.786  -5.628  1.00 18.73      A
ATOM    133  CG1 ILE A  87      40.968  18.786  -7.945  1.00 21.16      A
ATOM    134  CD1 ILE A  87      41.412  20.087  -8.588  1.00 25.26      A
ATOM    135  C   ILE A  87      38.731  17.709  -4.997  1.00 19.67      A
ATOM    136  O   ILE A  87      37.628  18.249  -5.052  1.00 20.41      A
ATOM    137  N   LEU A  88      39.240  17.229  -3.867  1.00 19.15      A
ATOM    138  CA  LEU A  88      38.508  17.324  -2.611  1.00 20.68      A
ATOM    139  CB  LEU A  88      38.870  16.151  -1.700  1.00 19.97      A
ATOM    140  CG  LEU A  88      38.529  14.759  -2.237  1.00 19.24      A
ATOM    141  CD1 LEU A  88      39.090  13.692  -1.311  1.00 21.41      A
ATOM    142  CD2 LEU A  88      37.029  14.622  -2.359  1.00 18.84      A
ATOM    143  C   LEU A  88      38.815  18.632  -1.901  1.00 23.11      A
ATOM    144  O   LEU A  88      37.999  19.146  -1.139  1.00 25.10      A
ATOM    145  N   GLY A  89      39.997  19.174  -2.149  1.00 24.09      A
ATOM    146  CA  GLY A  89      40.367  20.418  -1.507  1.00 24.27      A
ATOM    147  C   GLY A  89      41.658  20.954  -2.078  1.00 25.47      A
ATOM    148  O   GLY A  89      42.445  20.202  -2.666  1.00 22.19      A
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ATOM    149  N   GLU A  90      41.870  22.254  -1.906  1.00 26.22      A
ATOM    150  CA  GLU A  90      43.064  22.924  -2.404  1.00 29.96      A
ATOM    151  CB  GLU A  90      42.698  23.814  -3.596  1.00 30.75      A
ATOM    152  CG  GLU A  90      42.267  23.038  -4.831  1.00 34.32      A
ATOM    153  CD  GLU A  90      41.711  23.930  -5.927  1.00 38.27      A
ATOM    154  OE1 GLU A  90      40.590  24.456  -5.764  1.00 40.57      A
ATOM    155  OE2 GLU A  90      42.398  24.110  -6.952  1.00 40.90      A
ATOM    156  C   GLU A  90      43.711  23.768  -1.313  1.00 30.68      A
ATOM    157  O   GLU A  90      43.049  24.574  -0.668  1.00 32.83      A
ATOM    158  N   GLY A  91      45.006  23.566  -1.104  1.00 29.66      A
ATOM    159  CA  GLY A  91      45.724  24.332  -0.104  1.00 29.40      A
ATOM    160  C   GLY A  91      46.795  25.151  -0.798  1.00 29.98      A
ATOM    161  O   GLY A  91      46.894  25.130  -2.028  1.00 28.16      A
ATOM    162  N   SER A  92      47.605  25.870  -0.029  1.00 28.30      A
ATOM    163  CA  SER A  92      48.653  26.681  -0.633  1.00 30.50      A
ATOM    164  CB  SER A  92      49.165  27.717   0.370  1.00 32.43      A
ATOM    165  OG  SER A  92      49.520  27.099   1.593  1.00 40.94      A
ATOM    166  C   SER A  92      49.815  25.843  -1.164  1.00 29.77      A
ATOM    167  O   SER A  92      50.456  26.221  -2.143  1.00 30.46      A
ATOM    168  N   PHE A  93      50.087  24.703  -0.536  1.00 27.65      A
ATOM    169  CA  PHE A  93      51.185  23.855  -0.995  1.00 26.34      A
ATOM    170  CB  PHE A  93      52.281  23.785   0.068  1.00 27.95      A
ATOM    171  CG  PHE A  93      52.861  25.117   0.406  1.00 31.06      A
ATOM    172  CD1 PHE A  93      52.283  25.909   1.392  1.00 29.96      A
ATOM    173  CD2 PHE A  93      53.949  25.613  -0.308  1.00 31.38      A
ATOM    174  CE1 PHE A  93      52.779  27.181   1.665  1.00 32.69      A
ATOM    175  CE2 PHE A  93      54.452  26.883  -0.044  1.00 32.63      A
ATOM    176  CZ  PHE A  93      53.864  27.670   0.945  1.00 31.81      A
ATOM    177  C   PHE A  93      50.759  22.445  -1.365  1.00 25.39      A
ATOM    178  O   PHE A  93      51.601  21.559  -1.522  1.00 24.59      A
ATOM    179  N   SER A  94      49.457  22.235  -1.519  1.00 23.63      A
ATOM    180  CA  SER A  94      48.965  20.912  -1.860  1.00 21.43      A
ATOM    181  CB  SER A  94      49.017  20.013  -0.628  1.00 21.42      A
ATOM    182  OG  SER A  94      48.091  20.475   0.340  1.00 21.19      A
ATOM    183  C   SER A  94      47.539  20.925  -2.378  1.00 19.82      A
ATOM    184  O   SER A  94      46.795  21.882  -2.173  1.00 18.76      A
ATOM    185  N   THR A  95      47.174  19.832  -3.038  1.00 19.38      A
ATOM    186  CA  THR A  95      45.840  19.637  -3.580  1.00 17.98      A
ATOM    187  CB  THR A  95      45.818  19.818  -5.110  1.00 19.25      A
ATOM    188  OG1 THR A  95      46.196  21.162  -5.434  1.00 22.04      A
ATOM    189  CG2 THR A  95      44.421  19.549  -5.661  1.00 17.61      A
ATOM    190  C   THR A  95      45.455  18.201  -3.243  1.00 18.61      A
ATOM    191  O   THR A  95      46.212  17.264  -3.524  1.00 17.10      A
ATOM    192  N   VAL A  96      44.295  18.024  -2.623  1.00 16.53      A
ATOM    193  CA  VAL A  96      43.845  16.685  -2.266  1.00 16.05      A
ATOM    194  CB  VAL A  96      43.170  16.672  -0.886  1.00 16.32      A
ATOM    195  CG1 VAL A  96      42.741  15.249  -0.532  1.00 18.02      A
ATOM    196  CG2 VAL A  96      44.145  17.206   0.168  1.00 16.69      A
ATOM    197  C   VAL A  96      42.875  16.207  -3.335  1.00 16.42      A
ATOM    198  O   VAL A  96      41.906  16.892  -3.665  1.00 16.47      A
ATOM    199  N   VAL A  97      43.157  15.033  -3.888  1.00 16.80      A
ATOM    200  CA  VAL A  97      42.338  14.471  -4.949  1.00 16.72      A
ATOM    201  CB  VAL A  97      43.153  14.354  -6.255  1.00 18.43      A
ATOM    202  CG1 VAL A  97      42.249  13.927  -7.404  1.00 19.69      A
ATOM    203  CG2 VAL A  97      43.831  15.685  -6.569  1.00 17.84      A
ATOM    204  C   VAL A  97      41.812  13.091  -4.583  1.00 16.77      A
ATOM    205  O   VAL A  97      42.532  12.270  -4.014  1.00 17.13      A
ATOM    206  N   LEU A  98      40.545  12.845  -4.895  1.00 16.62      A
ATOM    207  CA  LEU A  98      39.947  11.548  -4.624  1.00 17.04      A
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ATOM	208	CB	LEU	A	98	38.424	11.633	-4.743	1.00	16.89	A
ATOM	209	CG	LEU	A	98	37.635	10.342	-4.508	1.00	19.46	A
ATOM	210	CD1	LEU	A	98	37.990	9.762	-3.146	1.00	20.07	A
ATOM	211	CD2	LEU	A	98	36.143	10.627	-4.588	1.00	17.93	A
ATOM	212	C	LEU	A	98	40.512	10.597	-5.677	1.00	17.38	A
ATOM	213	O	LEU	A	98	40.527	10.920	-6.863	1.00	18.60	A
ATOM	214	N	ALA	A	99	40.995	9.438	-5.246	1.00	17.13	A
ATOM	215	CA	ALA	A	99	41.570	8.466	-6.168	1.00	18.42	A
ATOM	216	CB	ALA	A	99	43.090	8.524	-6.105	1.00	14.76	A
ATOM	217	C	ALA	A	99	41.102	7.055	-5.848	1.00	21.40	A
ATOM	218	O	ALA	A	99	40.941	6.691	-4.679	1.00	22.52	A
ATOM	219	N	ARG	A	100	40.878	6.261	-6.888	1.00	19.77	A
ATOM	220	CA	ARG	A	100	40.459	4.884	-6.693	1.00	20.85	A
ATOM	221	CB	ARG	A	100	39.202	4.585	-7.518	1.00	24.22	A
ATOM	222	CG	ARG	A	100	38.608	3.205	-7.256	1.00	31.78	A
ATOM	223	CD	ARG	A	100	37.326	2.979	-8.048	1.00	36.24	A
ATOM	224	NE	ARG	A	100	36.213	3.818	-7.594	1.00	41.40	A
ATOM	225	CZ	ARG	A	100	35.566	3.662	-6.439	1.00	42.05	A
ATOM	226	NH1	ARG	A	100	35.912	2.696	-5.598	1.00	40.67	A
ATOM	227	NH2	ARG	A	100	34.559	4.468	-6.128	1.00	43.65	A
ATOM	228	C	ARG	A	100	41.613	3.985	-7.129	1.00	18.63	A
ATOM	229	O	ARG	A	100	42.078	4.065	-8.271	1.00	19.49	A
ATOM	230	N	GLU	A	101	42.102	3.157	-6.212	1.00	16.43	A
ATOM	231	CA	GLU	A	101	43.196	2.246	-6.533	1.00	16.11	A
ATOM	232	CB	GLU	A	101	43.774	1.637	-5.248	1.00	16.79	A
ATOM	233	CG	GLU	A	101	44.917	0.657	-5.488	1.00	16.51	A
ATOM	234	CD	GLU	A	101	45.501	0.115	-4.200	1.00	18.20	A
ATOM	235	OE1	GLU	A	101	44.733	-0.081	-3.239	1.00	18.32	A
ATOM	236	OE2	GLU	A	101	46.725	-0.132	-4.150	1.00	17.14	A
ATOM	237	C	GLU	A	101	42.625	1.152	-7.442	1.00	17.92	A
ATOM	238	O	GLU	A	101	41.681	0.462	-7.069	1.00	18.02	A
ATOM	239	N	LEU	A	102	43.198	1.002	-8.632	1.00	19.06	A
ATOM	240	CA	LEU	A	102	42.718	0.025	-9.607	1.00	20.71	A
ATOM	241	CB	LEU	A	102	43.569	0.097	-10.878	1.00	23.42	A
ATOM	242	CG	LEU	A	102	43.531	1.426	-11.642	1.00	25.30	A
ATOM	243	CD1	LEU	A	102	44.577	1.414	-12.748	1.00	27.88	A
ATOM	244	CD2	LEU	A	102	42.140	1.647	-12.214	1.00	26.79	A
ATOM	245	C	LEU	A	102	42.671	-1.418	-9.125	1.00	21.62	A
ATOM	246	O	LEU	A	102	41.668	-2.103	-9.305	1.00	21.09	A
ATOM	247	N	ALA	A	103	43.753	-1.874	-8.507	1.00	19.38	A
ATOM	248	CA	ALA	A	103	43.836	-3.249	-8.035	1.00	20.87	A
ATOM	249	CB	ALA	A	103	45.284	-3.571	-7.671	1.00	19.23	A
ATOM	250	C	ALA	A	103	42.919	-3.629	-6.872	1.00	19.92	A
ATOM	251	O	ALA	A	103	42.703	-4.815	-6.628	1.00	20.38	A
ATOM	252	N	THR	A	104	42.361	-2.643	-6.175	1.00	18.12	A
ATOM	253	CA	THR	A	104	41.517	-2.927	-5.018	1.00	17.15	A
ATOM	254	CB	THR	A	104	42.212	-2.484	-3.717	1.00	19.54	A
ATOM	255	OG1	THR	A	104	42.456	-1.070	-3.773	1.00	19.26	A
ATOM	256	CG2	THR	A	104	43.536	-3.219	-3.529	1.00	17.02	A
ATOM	257	C	THR	A	104	40.159	-2.247	-5.026	1.00	19.44	A
ATOM	258	O	THR	A	104	39.259	-2.648	-4.285	1.00	18.70	A
ATOM	259	N	SER	A	105	40.034	-1.207	-5.847	1.00	19.65	A
ATOM	260	CA	SER	A	105	38.819	-0.400	-5.967	1.00	19.37	A
ATOM	261	CB	SER	A	105	37.598	-1.304	-6.173	1.00	21.81	A
ATOM	262	OG	SER	A	105	36.431	-0.539	-6.412	1.00	23.01	A
ATOM	263	C	SER	A	105	38.644	0.447	-4.701	1.00	18.99	A
ATOM	264	O	SER	A	105	37.602	1.070	-4.488	1.00	18.66	A
ATOM	265	N	ARG	A	106	39.674	0.468	-3.861	1.00	16.84	A
ATOM	266	CA	ARG	A	106	39.655	1.267	-2.634	1.00	16.21	A

ATOM	267	CB	ARG	A	106	40.827	0.886	-1.723	1.00	16.41	A
ATOM	268	CG	ARG	A	106	40.619	-0.367	-0.906	1.00	15.49	A
ATOM	269	CD	ARG	A	106	41.887	-0.755	-0.170	1.00	17.43	A
ATOM	270	NE	ARG	A	106	41.620	-1.792	0.824	1.00	20.47	A
ATOM	271	CZ	ARG	A	106	42.548	-2.568	1.371	1.00	20.24	A
ATOM	272	NH1	ARG	A	106	43.821	-2.433	1.017	1.00	17.80	A
ATOM	273	NH2	ARG	A	106	42.198	-3.468	2.285	1.00	20.14	A
ATOM	274	C	ARG	A	106	39.785	2.746	-2.981	1.00	17.37	A
ATOM	275	O	ARG	A	106	40.514	3.103	-3.902	1.00	17.75	A
ATOM	276	N	GLU	A	107	39.085	3.599	-2.240	1.00	16.06	A
ATOM	277	CA	GLU	A	107	39.156	5.039	-2.461	1.00	20.80	A
ATOM	278	CB	GLU	A	107	37.779	5.694	-2.337	1.00	22.93	A
ATOM	279	CG	GLU	A	107	36.711	5.171	-3.269	1.00	30.87	A
ATOM	280	CD	GLU	A	107	35.431	5.975	-3.148	1.00	32.40	A
ATOM	281	OE1	GLU	A	107	35.262	6.939	-3.923	1.00	33.74	A
ATOM	282	OE2	GLU	A	107	34.608	5.654	-2.263	1.00	36.00	A
ATOM	283	C	GLU	A	107	40.053	5.678	-1.410	1.00	18.93	A
ATOM	284	O	GLU	A	107	39.891	5.427	-0.220	1.00	19.21	A
ATOM	285	N	TYR	A	108	40.988	6.507	-1.852	1.00	16.70	A
ATOM	286	CA	TYR	A	108	41.883	7.209	-0.942	1.00	15.86	A
ATOM	287	CB	TYR	A	108	43.325	6.728	-1.104	1.00	15.30	A
ATOM	288	CG	TYR	A	108	43.593	5.328	-0.612	1.00	16.33	A
ATOM	289	CD1	TYR	A	108	43.765	5.066	0.746	1.00	16.36	A
ATOM	290	CE1	TYR	A	108	44.046	3.769	1.201	1.00	18.48	A
ATOM	291	CD2	TYR	A	108	43.701	4.268	-1.511	1.00	13.25	A
ATOM	292	CE2	TYR	A	108	43.980	2.981	-1.075	1.00	17.28	A
ATOM	293	CZ	TYR	A	108	44.152	2.736	0.276	1.00	19.17	A
ATOM	294	OH	TYR	A	108	44.440	1.461	0.688	1.00	19.38	A
ATOM	295	C	TYR	A	108	41.850	8.687	-1.292	1.00	16.80	A
ATOM	296	O	TYR	A	108	41.560	9.058	-2.431	1.00	15.22	A
ATOM	297	N	ALA	A	109	42.132	9.528	-0.306	1.00	14.61	A
ATOM	298	CA	ALA	A	109	42.207	10.957	-0.539	1.00	14.30	A
ATOM	299	CB	ALA	A	109	41.671	11.726	0.661	1.00	14.78	A
ATOM	300	C	ALA	A	109	43.713	11.136	-0.667	1.00	16.79	A
ATOM	301	O	ALA	A	109	44.450	10.983	0.317	1.00	16.52	A
ATOM	302	N	ILE	A	110	44.182	11.410	-1.881	1.00	14.80	A
ATOM	303	CA	ILE	A	110	45.609	11.574	-2.093	1.00	15.80	A
ATOM	304	CB	ILE	A	110	46.065	10.863	-3.396	1.00	16.85	A
ATOM	305	CG2	ILE	A	110	47.550	11.098	-3.632	1.00	16.80	A
ATOM	306	CG1	ILE	A	110	45.774	9.358	-3.284	1.00	17.76	A
ATOM	307	CD1	ILE	A	110	46.308	8.513	-4.437	1.00	16.07	A
ATOM	308	C	ILE	A	110	46.004	13.045	-2.129	1.00	17.78	A
ATOM	309	O	ILE	A	110	45.534	13.813	-2.976	1.00	16.24	A
ATOM	310	N	LYS	A	111	46.846	13.435	-1.177	1.00	16.15	A
ATOM	311	CA	LYS	A	111	47.326	14.808	-1.100	1.00	17.20	A
ATOM	312	CB	LYS	A	111	47.700	15.176	0.344	1.00	17.41	A
ATOM	313	CG	LYS	A	111	48.350	16.547	0.464	1.00	20.71	A
ATOM	314	CD	LYS	A	111	48.585	16.971	1.910	1.00	24.25	A
ATOM	315	CE	LYS	A	111	47.288	17.381	2.598	1.00	29.46	A
ATOM	316	NZ	LYS	A	111	47.516	17.866	4.000	1.00	30.50	A
ATOM	317	C	LYS	A	111	48.551	14.890	-1.994	1.00	16.41	A
ATOM	318	O	LYS	A	111	49.509	14.137	-1.813	1.00	18.20	A
ATOM	319	N	ILE	A	112	48.509	15.798	-2.963	1.00	15.87	A
ATOM	320	CA	ILE	A	112	49.606	15.967	-3.907	1.00	17.28	A
ATOM	321	CB	ILE	A	112	49.079	15.911	-5.358	1.00	16.43	A
ATOM	322	CG2	ILE	A	112	50.235	15.998	-6.341	1.00	15.12	A
ATOM	323	CG1	ILE	A	112	48.293	14.609	-5.565	1.00	16.82	A
ATOM	324	CD1	ILE	A	112	47.580	14.511	-6.904	1.00	18.47	A
ATOM	325	C	ILE	A	112	50.307	17.301	-3.663	1.00	19.03	A

	ATOM	326	O	ILE	A	112	49.669	18.350	-3.635	1.00	19.15	A
	ATOM	327	N	LEU	A	113	51.622	17.245	-3.472	1.00	20.22	A
	ATOM	328	CA	LEU	A	113	52.416	18.442	-3.214	1.00	22.36	A
	ATOM	329	CB	LEU	A	113	52.995	18.397	-1.794	1.00	22.13	A
5	ATOM	330	CG	LEU	A	113	52.042	18.063	-0.646	1.00	22.46	A
	ATOM	331	CD1	LEU	A	113	51.866	16.557	-0.553	1.00	23.81	A
	ATOM	332	CD2	LEU	A	113	52.603	18.595	0.660	1.00	23.68	A
	ATOM	333	C	LEU	A	113	53.560	18.547	-4.215	1.00	23.37	A
	ATOM	334	O	LEU	A	113	54.300	17.586	-4.424	1.00	23.11	A
10	ATOM	335	N	GLU	A	114	53.706	19.714	-4.834	1.00	23.88	A
	ATOM	336	CA	GLU	A	114	54.771	19.920	-5.806	1.00	26.00	A
	ATOM	337	CB	GLU	A	114	54.435	21.111	-6.706	1.00	27.74	A
	ATOM	338	CG	GLU	A	114	55.533	21.452	-7.696	1.00	35.07	A
	ATOM	339	CD	GLU	A	114	55.220	22.696	-8.497	1.00	39.24	A
15	ATOM	340	OE1	GLU	A	114	54.808	23.703	-7.885	1.00	41.45	A
	ATOM	341	OE2	GLU	A	114	55.395	22.670	-9.736	1.00	44.05	A
	ATOM	342	C	GLU	A	114	56.087	20.163	-5.067	1.00	24.37	A
	ATOM	343	O	GLU	A	114	56.186	21.071	-4.238	1.00	24.43	A
	ATOM	344	N	LYS	A	115	57.096	19.350	-5.360	1.00	24.10	A
20	ATOM	345	CA	LYS	A	115	58.376	19.493	-4.678	1.00	24.93	A
	ATOM	346	CB	LYS	A	115	59.339	18.373	-5.103	1.00	23.72	A
	ATOM	347	CG	LYS	A	115	59.139	17.080	-4.308	1.00	23.09	A
	ATOM	348	CD	LYS	A	115	60.064	15.944	-4.743	1.00	21.92	A
	ATOM	349	CE	LYS	A	115	59.691	15.400	-6.117	1.00	22.42	A
25	ATOM	350	NZ	LYS	A	115	60.447	14.150	-6.448	1.00	19.71	A
	ATOM	351	C	LYS	A	115	59.031	20.858	-4.868	1.00	26.87	A
	ATOM	352	O	LYS	A	115	59.492	21.469	-3.903	1.00	26.17	A
	ATOM	353	N	ARG	A	116	59.058	21.348	-6.102	1.00	28.73	A
	ATOM	354	CA	ARG	A	116	59.678	22.638	-6.380	1.00	29.66	A
30	ATOM	355	CB	ARG	A	116	59.533	22.980	-7.868	1.00	31.29	A
	ATOM	356	CG	ARG	A	116	60.047	24.361	-8.267	1.00	33.19	A
	ATOM	357	CD	ARG	A	116	61.368	24.710	-7.590	1.00	35.13	A
	ATOM	358	NE	ARG	A	116	62.329	23.612	-7.618	1.00	36.42	A
	ATOM	359	CZ	ARG	A	116	63.510	23.648	-7.009	1.00	36.18	A
35	ATOM	360	NH1	ARG	A	116	63.871	24.729	-6.332	1.00	36.12	A
	ATOM	361	NH2	ARG	A	116	64.324	22.602	-7.067	1.00	35.77	A
	ATOM	362	C	ARG	A	116	59.097	23.761	-5.519	1.00	29.70	A
	ATOM	363	O	ARG	A	116	59.843	24.515	-4.889	1.00	29.16	A
	ATOM	364	N	HIS	A	117	57.773	23.862	-5.472	1.00	27.22	A
40	ATOM	365	CA	HIS	A	117	57.126	24.903	-4.681	1.00	26.33	A
	ATOM	366	CB	HIS	A	117	55.606	24.835	-4.848	1.00	28.41	A
	ATOM	367	CG	HIS	A	117	54.881	26.005	-4.258	1.00	31.82	A
	ATOM	368	CD2	HIS	A	117	55.309	27.249	-3.935	1.00	33.19	A
	ATOM	369	ND1	HIS	A	117	53.536	25.974	-3.961	1.00	34.30	A
45	ATOM	370	CE1	HIS	A	117	53.165	27.148	-3.480	1.00	34.58	A
	ATOM	371	NE2	HIS	A	117	54.222	27.940	-3.455	1.00	35.18	A
	ATOM	372	C	HIS	A	117	57.477	24.780	-3.202	1.00	26.22	A
	ATOM	373	O	HIS	A	117	57.737	25.776	-2.534	1.00	25.67	A
	ATOM	374	N	ILE	A	118	57.469	23.554	-2.689	1.00	24.94	A
50	ATOM	375	CA	ILE	A	118	57.792	23.315	-1.285	1.00	23.94	A
	ATOM	376	CB	ILE	A	118	57.711	21.812	-0.952	1.00	23.50	A
	ATOM	377	CG2	ILE	A	118	58.374	21.533	0.389	1.00	23.76	A
	ATOM	378	CG1	ILE	A	118	56.246	21.362	-0.959	1.00	24.42	A
	ATOM	379	CD1	ILE	A	118	56.066	19.858	-0.834	1.00	28.06	A
55	ATOM	380	C	ILE	A	118	59.195	23.821	-0.958	1.00	23.78	A
	ATOM	381	O	ILE	A	118	59.402	24.495	0.048	1.00	23.49	A
	ATOM	382	N	ILE	A	119	60.153	23.489	-1.815	1.00	23.46	A
	ATOM	383	CA	ILE	A	119	61.534	23.913	-1.619	1.00	25.13	A
	ATOM	384	CB	ILE	A	119	62.467	23.250	-2.664	1.00	24.25	A

	ATOM	385	CG2	ILE	A	119	63.858	23.890	-2.617	1.00 22.47	A
	ATOM	386	CG1	ILE	A	119	62.540	21.738	-2.395	1.00 25.05	A
	ATOM	387	CD1	ILE	A	119	63.327	20.945	-3.439	1.00 24.62	A
	ATOM	388	C	ILE	A	119	61.667	25.435	-1.705	1.00 25.96	A
5	ATOM	389	O	ILE	A	119	62.330	26.051	-0.872	1.00 24.78	A
	ATOM	390	N	LYS	A	120	61.028	26.039	-2.704	1.00 27.67	A
	ATOM	391	CA	LYS	A	120	61.100	27.489	-2.879	1.00 30.29	A
	ATOM	392	CB	LYS	A	120	60.242	27.940	-4.060	1.00 32.34	A
	ATOM	393	CG	LYS	A	120	60.674	27.407	-5.409	1.00 39.30	A
10	ATOM	394	CD	LYS	A	120	59.765	27.950	-6.512	1.00 45.19	A
	ATOM	395	CE	LYS	A	120	58.294	27.636	-6.218	1.00 46.48	A
	ATOM	396	NZ	LYS	A	120	57.363	28.155	-7.252	1.00 46.49	A
	ATOM	397	C	LYS	A	120	60.647	28.247	-1.638	1.00 30.89	A
	ATOM	398	O	LYS	A	120	61.303	29.198	-1.217	1.00 32.48	A
15	ATOM	399	N	GLU	A	121	59.527	27.825	-1.055	1.00 29.82	A
	ATOM	400	CA	GLU	A	121	58.986	28.488	0.128	1.00 30.33	A
	ATOM	401	CB	GLU	A	121	57.455	28.416	0.117	1.00 33.04	A
	ATOM	402	CG	GLU	A	121	56.794	29.021	-1.120	1.00 36.45	A
	ATOM	403	CD	GLU	A	121	57.221	30.456	-1.373	1.00 39.88	A
20	ATOM	404	OE1	GLU	A	121	57.200	31.264	-0.420	1.00 40.53	A
	ATOM	405	OE2	GLU	A	121	57.573	30.778	-2.529	1.00 43.24	A
	ATOM	406	C	GLU	A	121	59.511	27.930	1.451	1.00 30.37	A
	ATOM	407	O	GLU	A	121	58.946	28.204	2.513	1.00 31.24	A
	ATOM	408	N	ASN	A	122	60.588	27.151	1.390	1.00 29.03	A
25	ATOM	409	CA	ASN	A	122	61.183	26.573	2.594	1.00 28.46	A
	ATOM	410	CB	ASN	A	122	61.836	27.673	3.436	1.00 31.28	A
	ATOM	411	CG	ASN	A	122	62.945	28.395	2.698	1.00 34.12	A
	ATOM	412	OD1	ASN	A	122	62.697	29.143	1.754	1.00 35.57	A
	ATOM	413	ND2	ASN	A	122	64.181	28.169	3.127	1.00 35.73	A
30	ATOM	414	C	ASN	A	122	60.157	25.835	3.456	1.00 26.89	A
	ATOM	415	O	ASN	A	122	60.085	26.055	4.663	1.00 27.23	A
	ATOM	416	N	LYS	A	123	59.375	24.955	2.842	1.00 23.99	A
	ATOM	417	CA	LYS	A	123	58.358	24.210	3.574	1.00 22.43	A
	ATOM	418	CB	LYS	A	123	57.031	24.248	2.810	1.00 21.97	A
35	ATOM	419	CG	LYS	A	123	56.475	25.645	2.599	1.00 25.68	A
	ATOM	420	CD	LYS	A	123	56.253	26.354	3.927	1.00 27.54	A
	ATOM	421	CE	LYS	A	123	55.822	27.796	3.716	1.00 31.30	A
	ATOM	422	NZ	LYS	A	123	55.756	28.540	5.004	1.00 33.21	A
	ATOM	423	C	LYS	A	123	58.748	22.759	3.821	1.00 22.20	A
40	ATOM	424	O	LYS	A	123	57.924	21.960	4.264	1.00 22.50	A
	ATOM	425	N	VAL	A	124	59.997	22.412	3.535	1.00 20.59	A
	ATOM	426	CA	VAL	A	124	60.439	21.039	3.730	1.00 20.25	A
	ATOM	427	CB	VAL	A	124	61.922	20.850	3.328	1.00 19.43	A
	ATOM	428	CG1	VAL	A	124	62.346	19.407	3.573	1.00 18.69	A
45	ATOM	429	CG2	VAL	A	124	62.104	21.195	1.853	1.00 18.21	A
	ATOM	430	C	VAL	A	124	60.236	20.561	5.163	1.00 19.53	A
	ATOM	431	O	VAL	A	124	59.841	19.418	5.385	1.00 20.02	A
	ATOM	432	N	PRO	A	125	60.513	21.422	6.159	1.00 20.01	A
	ATOM	433	CD	PRO	A	125	61.178	22.738	6.118	1.00 18.69	A
50	ATOM	434	CA	PRO	A	125	60.318	20.979	7.544	1.00 19.88	A
	ATOM	435	CB	PRO	A	125	60.793	22.180	8.363	1.00 19.95	A
	ATOM	436	CG	PRO	A	125	61.839	22.805	7.479	1.00 18.85	A
	ATOM	437	C	PRO	A	125	58.848	20.642	7.824	1.00 19.76	A
	ATOM	438	O	PRO	A	125	58.544	19.700	8.550	1.00 16.99	A
55	ATOM	439	N	TYR	A	126	57.947	21.418	7.235	1.00 18.98	A
	ATOM	440	CA	TYR	A	126	56.516	21.220	7.435	1.00 21.97	A
	ATOM	441	CB	TYR	A	126	55.752	22.448	6.933	1.00 25.17	A
	ATOM	442	CG	TYR	A	126	56.040	23.690	7.748	1.00 30.98	A
	ATOM	443	CD1	TYR	A	126	55.438	23.886	8.991	1.00 33.95	A

ATOM	444	CE1	TYR	A	126	55.721	25.015	9.763	1.00	36.60	A
ATOM	445	CD2	TYR	A	126	56.938	24.657	7.292	1.00	35.43	A
ATOM	446	CE2	TYR	A	126	57.231	25.792	8.058	1.00	37.20	A
ATOM	447	CZ	TYR	A	126	56.618	25.962	9.291	1.00	37.40	A
ATOM	448	OH	TYR	A	126	56.903	27.073	10.052	1.00	40.85	A
ATOM	449	C	TYR	A	126	55.990	19.956	6.762	1.00	21.35	A
ATOM	450	O	TYR	A	126	55.265	19.175	7.383	1.00	20.49	A
ATOM	451	N	VAL	A	127	56.354	19.746	5.501	1.00	18.16	A
ATOM	452	CA	VAL	A	127	55.892	18.562	4.790	1.00	17.58	A
ATOM	453	CB	VAL	A	127	56.308	18.596	3.308	1.00	17.45	A
ATOM	454	CG1	VAL	A	127	55.786	17.350	2.600	1.00	17.97	A
ATOM	455	CG2	VAL	A	127	55.751	19.850	2.641	1.00	14.90	A
ATOM	456	C	VAL	A	127	56.459	17.306	5.448	1.00	18.39	A
ATOM	457	O	VAL	A	127	55.769	16.298	5.583	1.00	18.14	A
ATOM	458	N	THR	A	128	57.716	17.381	5.869	1.00	17.50	A
ATOM	459	CA	THR	A	128	58.375	16.260	6.530	1.00	18.54	A
ATOM	460	CB	THR	A	128	59.861	16.586	6.805	1.00	18.01	A
ATOM	461	OG1	THR	A	128	60.537	16.804	5.559	1.00	21.14	A
ATOM	462	CG2	THR	A	128	60.536	15.446	7.545	1.00	17.95	A
ATOM	463	C	THR	A	128	57.676	15.941	7.856	1.00	19.49	A
ATOM	464	O	THR	A	128	57.438	14.776	8.179	1.00	18.76	A
ATOM	465	N	ARG	A	129	57.345	16.981	8.619	1.00	19.60	A
ATOM	466	CA	ARG	A	129	56.673	16.804	9.904	1.00	20.12	A
ATOM	467	CB	ARG	A	129	56.534	18.144	10.621	1.00	21.33	A
ATOM	468	CG	ARG	A	129	55.948	18.029	12.023	1.00	28.02	A
ATOM	469	CD	ARG	A	129	55.721	19.404	12.597	1.00	31.25	A
ATOM	470	NE	ARG	A	129	56.940	20.205	12.560	1.00	37.78	A
ATOM	471	CZ	ARG	A	129	56.962	21.524	12.391	1.00	40.10	A
ATOM	472	NH1	ARG	A	129	55.828	22.197	12.239	1.00	40.03	A
ATOM	473	NH2	ARG	A	129	58.119	22.170	12.374	1.00	44.58	A
ATOM	474	C	ARG	A	129	55.288	16.186	9.729	1.00	20.08	A
ATOM	475	O	ARG	A	129	54.891	15.305	10.496	1.00	20.40	A
ATOM	476	N	GLU	A	130	54.553	16.654	8.724	1.00	18.79	A
ATOM	477	CA	GLU	A	130	53.222	16.125	8.454	1.00	20.10	A
ATOM	478	CB	GLU	A	130	52.638	16.749	7.183	1.00	19.92	A
ATOM	479	CG	GLU	A	130	51.350	16.087	6.708	1.00	27.85	A
ATOM	480	CD	GLU	A	130	50.581	16.933	5.707	1.00	29.72	A
ATOM	481	OE1	GLU	A	130	51.216	17.528	4.814	1.00	33.46	A
ATOM	482	OE2	GLU	A	130	49.339	16.996	5.807	1.00	30.74	A
ATOM	483	C	GLU	A	130	53.301	14.615	8.295	1.00	19.81	A
ATOM	484	O	GLU	A	130	52.553	13.875	8.935	1.00	18.37	A
ATOM	485	N	ARG	A	131	54.219	14.162	7.447	1.00	20.41	A
ATOM	486	CA	ARG	A	131	54.397	12.735	7.202	1.00	22.45	A
ATOM	487	CB	ARG	A	131	55.442	12.511	6.098	1.00	25.16	A
ATOM	488	CG	ARG	A	131	55.742	11.043	5.840	1.00	28.75	A
ATOM	489	CD	ARG	A	131	56.736	10.837	4.708	1.00	33.75	A
ATOM	490	NE	ARG	A	131	57.020	9.415	4.520	1.00	40.07	A
ATOM	491	CZ	ARG	A	131	57.756	8.915	3.532	1.00	43.07	A
ATOM	492	NH1	ARG	A	131	58.293	9.721	2.625	1.00	44.91	A
ATOM	493	NH2	ARG	A	131	57.955	7.606	3.449	1.00	44.45	A
ATOM	494	C	ARG	A	131	54.820	11.982	8.466	1.00	23.24	A
ATOM	495	O	ARG	A	131	54.241	10.948	8.804	1.00	23.86	A
ATOM	496	N	ASP	A	132	55.831	12.497	9.160	1.00	21.99	A
ATOM	497	CA	ASP	A	132	56.318	11.850	10.370	1.00	22.04	A
ATOM	498	CB	ASP	A	132	57.570	12.564	10.888	1.00	23.72	A
ATOM	499	CG	ASP	A	132	58.750	12.442	9.932	1.00	27.77	A
ATOM	500	OD1	ASP	A	132	58.681	11.620	8.989	1.00	27.34	A
ATOM	501	OD2	ASP	A	132	59.753	13.163	10.128	1.00	28.70	A
ATOM	502	C	ASP	A	132	55.258	11.772	11.474	1.00	21.69	A

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ATOM    503  O   ASP A 132      55.077  10.723  12.092  1.00 22.75      A
ATOM    504  N   VAL A 133      54.551  12.868  11.725  1.00 19.54      A
ATOM    505  CA  VAL A 133      53.525  12.843  12.759  1.00 18.52      A
ATOM    506  CB  VAL A 133      52.908  14.244  12.990  1.00 19.26      A
ATOM    507  CG1 VAL A 133      51.708  14.135  13.918  1.00 18.79      A
ATOM    508  CG2 VAL A 133      53.953  15.180  13.604  1.00 18.80      A
ATOM    509  C   VAL A 133      52.419  11.854  12.398  1.00 19.46      A
ATOM    510  O   VAL A 133      52.073  10.991  13.200  1.00 19.94      A
ATOM    511  N   MET A 134      51.878  11.957  11.187  1.00 19.15      A
ATOM    512  CA  MET A 134      50.807  11.052  10.792  1.00 21.25      A
ATOM    513  CB  MET A 134      50.309  11.381   9.383  1.00 17.34      A
ATOM    514  CG  MET A 134      49.615  12.730   9.302  1.00 20.00      A
ATOM    515  SD  MET A 134      48.643  12.952   7.798  1.00 24.21      A
ATOM    516  CE  MET A 134      47.033  12.434   8.400  1.00 23.20      A
ATOM    517  C   MET A 134      51.203   9.582  10.881  1.00 22.43      A
ATOM    518  O   MET A 134      50.384   8.741  11.249  1.00 23.82      A
ATOM    519  N   SER A 135      52.454   9.273  10.556  1.00 23.09      A
ATOM    520  CA  SER A 135      52.939   7.895  10.615  1.00 26.13      A
ATOM    521  CB  SER A 135      54.356   7.798  10.039  1.00 26.17      A
ATOM    522  OG  SER A 135      54.383   8.177   8.673  1.00 31.91      A
ATOM    523  C   SER A 135      52.957   7.358  12.045  1.00 26.58      A
ATOM    524  O   SER A 135      52.926   6.148  12.261  1.00 26.42      A
ATOM    525  N   ARG A 136      53.014   8.261  13.018  1.00 25.65      A
ATOM    526  CA  ARG A 136      53.056   7.870  14.425  1.00 27.47      A
ATOM    527  CB  ARG A 136      53.823   8.914  15.238  1.00 27.97      A
ATOM    528  CG  ARG A 136      55.283   9.082  14.857  1.00 32.00      A
ATOM    529  CD  ARG A 136      55.904  10.218  15.664  1.00 33.03      A
ATOM    530  NE  ARG A 136      55.602  10.073  17.084  1.00 36.11      A
ATOM    531  CZ  ARG A 136      55.867  10.990  18.007  1.00 39.74      A
ATOM    532  NH1 ARG A 136      56.449  12.132  17.661  1.00 40.55      A
ATOM    533  NH2 ARG A 136      55.540  10.769  19.276  1.00 36.72      A
ATOM    534  C   ARG A 136      51.667   7.709  15.036  1.00 26.38      A
ATOM    535  O   ARG A 136      51.516   7.121  16.106  1.00 27.06      A
ATOM    536  N   LEU A 137      50.655   8.235  14.360  1.00 24.77      A
ATOM    537  CA  LEU A 137      49.294   8.162  14.870  1.00 24.70      A
ATOM    538  CB  LEU A 137      48.483   9.363  14.371  1.00 24.52      A
ATOM    539  CG  LEU A 137      49.050  10.760  14.662  1.00 26.67      A
ATOM    540  CD1 LEU A 137      48.075  11.813  14.141  1.00 27.25      A
ATOM    541  CD2 LEU A 137      49.279  10.945  16.155  1.00 27.09      A
ATOM    542  C   LEU A 137      48.592   6.868  14.473  1.00 25.20      A
ATOM    543  O   LEU A 137      48.619   6.469  13.309  1.00 25.99      A
ATOM    544  N   ASP A 138      47.971   6.218  15.451  1.00 21.89      A
ATOM    545  CA  ASP A 138      47.239   4.977  15.219  1.00 21.35      A
ATOM    546  CB  ASP A 138      48.124   3.761  15.523  1.00 22.14      A
ATOM    547  CG  ASP A 138      47.432   2.448  15.201  1.00 24.90      A
ATOM    548  OD1 ASP A 138      46.631   2.423  14.241  1.00 24.78      A
ATOM    549  OD2 ASP A 138      47.691   1.443  15.897  1.00 25.39      A
ATOM    550  C   ASP A 138      46.031   4.991  16.138  1.00 20.47      A
ATOM    551  O   ASP A 138      45.967   4.248  17.118  1.00 19.06      A
ATOM    552  N   HIS A 139      45.075   5.852  15.810  1.00 18.27      A
ATOM    553  CA  HIS A 139      43.869   6.016  16.606  1.00 18.21      A
ATOM    554  CB  HIS A 139      44.096   7.157  17.612  1.00 15.84      A
ATOM    555  CG  HIS A 139      42.985   7.332  18.600  1.00 15.24      A
ATOM    556  CD2 HIS A 139      42.884   6.964  19.900  1.00 13.97      A
ATOM    557  ND1 HIS A 139      41.791   7.943  18.280  1.00 14.74      A
ATOM    558  CE1 HIS A 139      41.002   7.944  19.341  1.00 14.19      A
ATOM    559  NE2 HIS A 139      41.641   7.356  20.336  1.00 14.15      A
ATOM    560  C   HIS A 139      42.715   6.330  15.654  1.00 18.50      A
ATOM    561  O   HIS A 139      42.879   7.080  14.693  1.00 20.80      A
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	ATOM	562	N	PRO	A	140	41.527	5.767	15.913	1.00	18.32	A
	ATOM	563	CD	PRO	A	140	41.143	4.984	17.100	1.00	16.71	A
	ATOM	564	CA	PRO	A	140	40.367	6.001	15.048	1.00	17.43	A
	ATOM	565	CB	PRO	A	140	39.273	5.157	15.704	1.00	16.64	A
	ATOM	566	CG	PRO	A	140	39.643	5.204	17.152	1.00	18.43	A
	ATOM	567	C	PRO	A	140	39.914	7.441	14.803	1.00	18.77	A
	ATOM	568	O	PRO	A	140	39.207	7.695	13.831	1.00	19.88	A
	ATOM	569	N	PHE	A	141	40.301	8.381	15.664	1.00	17.14	A
	ATOM	570	CA	PHE	A	141	39.874	9.767	15.477	1.00	16.42	A
	ATOM	571	CB	PHE	A	141	39.568	10.422	16.836	1.00	14.60	A
	ATOM	572	CG	PHE	A	141	38.386	9.817	17.556	1.00	15.26	A
	ATOM	573	CD1	PHE	A	141	37.335	9.234	16.842	1.00	14.78	A
	ATOM	574	CD2	PHE	A	141	38.297	9.880	18.942	1.00	13.70	A
	ATOM	575	CE1	PHE	A	141	36.215	8.727	17.502	1.00	16.94	A
	ATOM	576	CE2	PHE	A	141	37.178	9.375	19.615	1.00	15.75	A
	ATOM	577	CZ	PHE	A	141	36.135	8.799	18.893	1.00	16.89	A
	ATOM	578	C	PHE	A	141	40.857	10.641	14.694	1.00	16.15	A
	ATOM	579	O	PHE	A	141	40.799	11.871	14.761	1.00	17.35	A
	ATOM	580	N	PHE	A	142	41.748	10.011	13.941	1.00	15.88	A
	ATOM	581	CA	PHE	A	142	42.727	10.756	13.154	1.00	17.89	A
	ATOM	582	CB	PHE	A	142	44.115	10.645	13.793	1.00	17.57	A
	ATOM	583	CG	PHE	A	142	44.240	11.371	15.103	1.00	18.74	A
	ATOM	584	CD1	PHE	A	142	44.559	12.726	15.135	1.00	17.77	A
	ATOM	585	CD2	PHE	A	142	43.997	10.711	16.304	1.00	18.74	A
	ATOM	586	CE1	PHE	A	142	44.632	13.417	16.347	1.00	15.77	A
	ATOM	587	CE2	PHE	A	142	44.065	11.393	17.522	1.00	17.56	A
	ATOM	588	CZ	PHE	A	142	44.383	12.747	17.542	1.00	17.14	A
	ATOM	589	C	PHE	A	142	42.793	10.231	11.729	1.00	19.12	A
	ATOM	590	O	PHE	A	142	42.659	9.030	11.504	1.00	20.01	A
	ATOM	591	N	VAL	A	143	42.978	11.135	10.769	1.00	18.72	A
	ATOM	592	CA	VAL	A	143	43.102	10.735	9.371	1.00	18.52	A
	ATOM	593	CB	VAL	A	143	43.294	11.961	8.440	1.00	20.66	A
	ATOM	594	CG1	VAL	A	143	43.843	11.521	7.080	1.00	21.29	A
	ATOM	595	CG2	VAL	A	143	41.958	12.673	8.252	1.00	22.97	A
	ATOM	596	C	VAL	A	143	44.342	9.865	9.330	1.00	18.68	A
	ATOM	597	O	VAL	A	143	45.355	10.199	9.943	1.00	18.42	A
	ATOM	598	N	LYS	A	144	44.259	8.745	8.623	1.00	18.30	A
	ATOM	599	CA	LYS	A	144	45.384	7.824	8.535	1.00	18.78	A
	ATOM	600	CB	LYS	A	144	44.889	6.373	8.608	1.00	22.27	A
	ATOM	601	CG	LYS	A	144	46.017	5.340	8.557	1.00	29.72	A
	ATOM	602	CD	LYS	A	144	45.491	3.912	8.674	1.00	34.16	A
	ATOM	603	CE	LYS	A	144	46.631	2.896	8.577	1.00	37.67	A
	ATOM	604	NZ	LYS	A	144	46.138	1.484	8.629	1.00	39.02	A
	ATOM	605	C	LYS	A	144	46.192	8.002	7.261	1.00	18.53	A
	ATOM	606	O	LYS	A	144	45.643	8.314	6.200	1.00	18.18	A
	ATOM	607	N	LEU	A	145	47.502	7.816	7.385	1.00	16.79	A
	ATOM	608	CA	LEU	A	145	48.411	7.900	6.251	1.00	17.45	A
	ATOM	609	CB	LEU	A	145	49.686	8.653	6.641	1.00	18.82	A
	ATOM	610	CG	LEU	A	145	50.734	8.902	5.549	1.00	20.23	A
	ATOM	611	CD1	LEU	A	145	51.836	9.799	6.093	1.00	18.83	A
	ATOM	612	CD2	LEU	A	145	51.317	7.581	5.069	1.00	19.79	A
	ATOM	613	C	LEU	A	145	48.739	6.450	5.907	1.00	19.19	A
	ATOM	614	O	LEU	A	145	49.451	5.772	6.659	1.00	17.36	A
	ATOM	615	N	TYR	A	146	48.215	5.972	4.782	1.00	17.28	A
	ATOM	616	CA	TYR	A	146	48.444	4.593	4.358	1.00	17.57	A
	ATOM	617	CB	TYR	A	146	47.288	4.098	3.486	1.00	17.74	A
	ATOM	618	CG	TYR	A	146	45.981	3.926	4.214	1.00	17.50	A
	ATOM	619	CD1	TYR	A	146	45.099	4.995	4.377	1.00	16.50	A
	ATOM	620	CE1	TYR	A	146	43.881	4.827	5.039	1.00	17.10	A

	ATOM	621	CD2	TYR	A	146	45.620	2.686	4.735	1.00	18.28	A
	ATOM	622	CE2	TYR	A	146	44.411	2.506	5.399	1.00	19.84	A
	ATOM	623	CZ	TYR	A	146	43.547	3.576	5.544	1.00	17.53	A
	ATOM	624	OH	TYR	A	146	42.342	3.376	6.169	1.00	20.67	A
5	ATOM	625	C	TYR	A	146	49.735	4.376	3.582	1.00	18.72	A
	ATOM	626	O	TYR	A	146	50.382	3.338	3.715	1.00	19.51	A
	ATOM	627	N	PHE	A	147	50.110	5.350	2.765	1.00	18.09	A
	ATOM	628	CA	PHE	A	147	51.307	5.203	1.952	1.00	17.20	A
	ATOM	629	CB	PHE	A	147	51.007	4.258	0.783	1.00	16.77	A
10	ATOM	630	CG	PHE	A	147	49.835	4.699	-0.070	1.00	17.75	A
	ATOM	631	CD1	PHE	A	147	49.967	5.752	-0.975	1.00	16.58	A
	ATOM	632	CD2	PHE	A	147	48.595	4.075	0.053	1.00	18.07	A
	ATOM	633	CE1	PHE	A	147	48.886	6.178	-1.742	1.00	19.62	A
	ATOM	634	CE2	PHE	A	147	47.503	4.492	-0.710	1.00	18.56	A
15	ATOM	635	CZ	PHE	A	147	47.647	5.546	-1.610	1.00	19.27	A
	ATOM	636	C	PHE	A	147	51.768	6.533	1.395	1.00	17.13	A
	ATOM	637	O	PHE	A	147	51.045	7.528	1.452	1.00	14.43	A
	ATOM	638	N	THR	A	148	52.981	6.534	0.854	1.00	17.12	A
	ATOM	639	CA	THR	A	148	53.541	7.718	0.232	1.00	17.96	A
20	ATOM	640	CB	THR	A	148	54.449	8.531	1.197	1.00	21.51	A
	ATOM	641	OG1	THR	A	148	55.605	7.760	1.537	1.00	18.83	A
	ATOM	642	CG2	THR	A	148	53.700	8.897	2.472	1.00	19.60	A
	ATOM	643	C	THR	A	148	54.386	7.262	-0.946	1.00	20.31	A
	ATOM	644	O	THR	A	148	54.860	6.124	-0.991	1.00	18.94	A
25	ATOM	645	N	PHE	A	149	54.543	8.149	-1.916	1.00	19.16	A
	ATOM	646	CA	PHE	A	149	55.368	7.877	-3.073	1.00	18.01	A
	ATOM	647	CB	PHE	A	149	54.748	6.801	-3.989	1.00	17.23	A
	ATOM	648	CG	PHE	A	149	53.389	7.144	-4.544	1.00	16.88	A
	ATOM	649	CD1	PHE	A	149	53.262	7.888	-5.712	1.00	18.58	A
30	ATOM	650	CD2	PHE	A	149	52.235	6.668	-3.927	1.00	17.31	A
	ATOM	651	CE1	PHE	A	149	52.007	8.149	-6.267	1.00	19.26	A
	ATOM	652	CE2	PHE	A	149	50.972	6.923	-4.470	1.00	19.17	A
	ATOM	653	CZ	PHE	A	149	50.858	7.663	-5.642	1.00	19.60	A
	ATOM	654	C	PHE	A	149	55.542	9.205	-3.774	1.00	20.85	A
35	ATOM	655	O	PHE	A	149	54.934	10.200	-3.376	1.00	19.76	A
	ATOM	656	N	GLN	A	150	56.398	9.241	-4.782	1.00	19.79	A
	ATOM	657	CA	GLN	A	150	56.636	10.481	-5.497	1.00	24.03	A
	ATOM	658	CB	GLN	A	150	57.659	11.347	-4.739	1.00	24.45	A
	ATOM	659	CG	GLN	A	150	58.986	10.645	-4.414	1.00	26.28	A
40	ATOM	660	CD	GLN	A	150	59.988	11.558	-3.692	1.00	29.02	A
	ATOM	661	OE1	GLN	A	150	60.693	12.353	-4.321	1.00	27.05	A
	ATOM	662	NE2	GLN	A	150	60.042	11.449	-2.365	1.00	26.47	A
	ATOM	663	C	GLN	A	150	57.160	10.203	-6.885	1.00	23.88	A
	ATOM	664	O	GLN	A	150	57.673	9.118	-7.158	1.00	24.79	A
45	ATOM	665	N	ASP	A	151	56.987	11.171	-7.774	1.00	25.88	A
	ATOM	666	CA	ASP	A	151	57.527	11.047	-9.117	1.00	26.49	A
	ATOM	667	CB	ASP	A	151	56.437	11.126	-10.199	1.00	24.54	A
	ATOM	668	CG	ASP	A	151	55.544	12.336	-10.064	1.00	24.95	A
	ATOM	669	OD1	ASP	A	151	56.005	13.379	-9.561	1.00	22.44	A
50	ATOM	670	OD2	ASP	A	151	54.369	12.242	-10.490	1.00	25.72	A
	ATOM	671	C	ASP	A	151	58.515	12.203	-9.220	1.00	28.63	A
	ATOM	672	O	ASP	A	151	58.890	12.780	-8.194	1.00	27.83	A
	ATOM	673	N	ASP	A	152	58.934	12.560	-10.426	1.00	29.21	A
	ATOM	674	CA	ASP	A	152	59.907	13.636	-10.562	1.00	31.88	A
55	ATOM	675	CB	ASP	A	152	60.325	13.792	-12.026	1.00	33.94	A
	ATOM	676	CG	ASP	A	152	61.033	12.564	-12.557	1.00	38.88	A
	ATOM	677	OD1	ASP	A	152	61.817	11.959	-11.791	1.00	39.67	A
	ATOM	678	OD2	ASP	A	152	60.817	12.211	-13.738	1.00	41.57	A
	ATOM	679	C	ASP	A	152	59.487	14.994	-10.013	1.00	30.90	A

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ATOM    680  O   ASP A 152      60.316  15.735  -9.482  1.00 31.69      A
ATOM    681  N   GLU A 153      58.207  15.322 -10.107  1.00 29.44      A
ATOM    682  CA  GLU A 153      57.767  16.632  -9.646  1.00 28.69      A
ATOM    683  CB  GLU A 153      56.984  17.327 -10.766  1.00 32.90      A
ATOM    684  CG  GLU A 153      57.451  16.987 -12.183  1.00 40.57      A
ATOM    685  CD  GLU A 153      56.920  15.643 -12.675  1.00 45.78      A
ATOM    686  OE1 GLU A 153      55.682  15.482 -12.760  1.00 48.91      A
ATOM    687  OE2 GLU A 153      57.736  14.747 -12.979  1.00 48.95      A
ATOM    688  C   GLU A 153      56.929  16.683  -8.372  1.00 26.43      A
ATOM    689  O   GLU A 153      56.947  17.688  -7.660  1.00 25.08      A
ATOM    690  N   LYS A 154      56.205  15.610  -8.069  1.00 22.39      A
ATOM    691  CA  LYS A 154      55.318  15.631  -6.912  1.00 21.43      A
ATOM    692  CB  LYS A 154      53.861  15.628  -7.398  1.00 20.33      A
ATOM    693  CG  LYS A 154      53.505  16.716  -8.403  1.00 21.92      A
ATOM    694  CD  LYS A 154      52.211  16.375  -9.146  1.00 19.70      A
ATOM    695  CE  LYS A 154      51.775  17.503 -10.077  1.00 20.04      A
ATOM    696  NZ  LYS A 154      50.631  17.094 -10.951  1.00 19.97      A
ATOM    697  C   LYS A 154      55.458  14.522  -5.881  1.00 20.43      A
ATOM    698  O   LYS A 154      55.949  13.426  -6.173  1.00 21.13      A
ATOM    699  N   LEU A 155      54.985  14.832  -4.676  1.00 19.69      A
ATOM    700  CA  LEU A 155      54.950  13.900  -3.553  1.00 19.10      A
ATOM    701  CB  LEU A 155      55.362  14.588  -2.252  1.00 19.65      A
ATOM    702  CG  LEU A 155      56.740  15.234  -2.129  1.00 21.20      A
ATOM    703  CD1 LEU A 155      56.848  15.918  -0.770  1.00 23.42      A
ATOM    704  CD2 LEU A 155      57.816  14.174  -2.277  1.00 23.08      A
ATOM    705  C   LEU A 155      53.478  13.507  -3.427  1.00 18.87      A
ATOM    706  O   LEU A 155      52.600  14.348  -3.620  1.00 18.61      A
ATOM    707  N   TYR A 156      53.209  12.249  -3.091  1.00 15.02      A
ATOM    708  CA  TYR A 156      51.834  11.783  -2.934  1.00 16.29      A
ATOM    709  CB  TYR A 156      51.470  10.769  -4.029  1.00 14.20      A
ATOM    710  CG  TYR A 156      51.603  11.273  -5.449  1.00 17.29      A
ATOM    711  CD1 TYR A 156      52.857  11.429  -6.045  1.00 16.46      A
ATOM    712  CE1 TYR A 156      52.978  11.884  -7.360  1.00 18.68      A
ATOM    713  CD2 TYR A 156      50.474  11.588  -6.202  1.00 16.43      A
ATOM    714  CE2 TYR A 156      50.583  12.048  -7.512  1.00 16.31      A
ATOM    715  CZ  TYR A 156      51.835  12.192  -8.083  1.00 18.17      A
ATOM    716  OH  TYR A 156      51.941  12.651  -9.371  1.00 17.47      A
ATOM    717  C   TYR A 156      51.657  11.108  -1.572  1.00 16.32      A
ATOM    718  O   TYR A 156      52.412  10.197  -1.235  1.00 16.27      A
ATOM    719  N   PHE A 157      50.678  11.568  -0.792  1.00 15.47      A
ATOM    720  CA  PHE A 157      50.385  10.966   0.508  1.00 16.66      A
ATOM    721  CB  PHE A 157      50.324  12.014   1.629  1.00 16.91      A
ATOM    722  CG  PHE A 157      51.631  12.708   1.907  1.00 18.96      A
ATOM    723  CD1 PHE A 157      52.821  12.261   1.340  1.00 20.31      A
ATOM    724  CD2 PHE A 157      51.664  13.829   2.732  1.00 21.12      A
ATOM    725  CE1 PHE A 157      54.025  12.926   1.585  1.00 22.08      A
ATOM    726  CE2 PHE A 157      52.865  14.500   2.982  1.00 22.18      A
ATOM    727  CZ  PHE A 157      54.045  14.045   2.405  1.00 21.27      A
ATOM    728  C   PHE A 157      49.016  10.308   0.404  1.00 16.52      A
ATOM    729  O   PHE A 157      48.029  10.979   0.110  1.00 17.32      A
ATOM    730  N   GLY A 158      48.953   9.002   0.644  1.00 15.97      A
ATOM    731  CA  GLY A 158      47.684   8.299   0.572  1.00 16.13      A
ATOM    732  C   GLY A 158      47.000   8.383   1.920  1.00 14.94      A
ATOM    733  O   GLY A 158      47.445   7.756   2.879  1.00 16.28      A
ATOM    734  N   LEU A 159      45.915   9.145   1.989  1.00 13.50      A
ATOM    735  CA  LEU A 159      45.191   9.340   3.241  1.00 15.20      A
ATOM    736  CB  LEU A 159      45.031  10.835   3.517  1.00 14.20      A
ATOM    737  CG  LEU A 159      46.270  11.726   3.385  1.00 19.00      A
ATOM    738  CD1 LEU A 159      45.847  13.188   3.477  1.00 17.12      A
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ATOM    739  CD2 LEU A 159      47.275  11.390   4.471  1.00 14.71      A
ATOM    740  C   LEU A 159      43.809   8.716   3.232  1.00 15.53      A
ATOM    741  O   LEU A 159      43.232   8.472   2.177  1.00 16.05      A
ATOM    742  N   SER A 160      43.268   8.469   4.418  1.00 15.86      A
ATOM    743  CA  SER A 160      41.932   7.917   4.498  1.00 19.01      A
ATOM    744  CB  SER A 160      41.566   7.582   5.949  1.00 22.90      A
ATOM    745  OG  SER A 160      41.901   8.629   6.833  1.00 24.18      A
ATOM    746  C   SER A 160      40.987   8.968   3.924  1.00 20.43      A
ATOM    747  O   SER A 160      41.213  10.173   4.062  1.00 19.96      A
ATOM    748  N   TYR A 161      39.945   8.508   3.250  1.00 19.20      A
ATOM    749  CA  TYR A 161      38.975   9.406   2.644  1.00 20.37      A
ATOM    750  CB  TYR A 161      38.471   8.785   1.332  1.00 20.00      A
ATOM    751  CG  TYR A 161      37.314   9.502   0.666  1.00 20.72      A
ATOM    752  CD1 TYR A 161      37.222  10.895   0.682  1.00 18.22      A
ATOM    753  CE1 TYR A 161      36.180  11.557   0.029  1.00 22.24      A
ATOM    754  CD2 TYR A 161      36.333   8.784  -0.020  1.00 20.53      A
ATOM    755  CE2 TYR A 161      35.287   9.436  -0.678  1.00 24.24      A
ATOM    756  CZ  TYR A 161      35.218  10.822  -0.648  1.00 22.32      A
ATOM    757  OH  TYR A 161      34.194  11.471  -1.298  1.00 23.03      A
ATOM    758  C   TYR A 161      37.812   9.681   3.598  1.00 20.14      A
ATOM    759  O   TYR A 161      36.959   8.819   3.810  1.00 19.53      A
ATOM    760  N   ALA A 162      37.791  10.880   4.178  1.00 19.92      A
ATOM    761  CA  ALA A 162      36.721  11.271   5.099  1.00 21.07      A
ATOM    762  CB  ALA A 162      37.187  12.419   6.002  1.00 19.60      A
ATOM    763  C   ALA A 162      35.542  11.712   4.238  1.00 22.07      A
ATOM    764  O   ALA A 162      35.436  12.875   3.860  1.00 20.66      A
ATOM    765  N   LYS A 163      34.653  10.769   3.945  1.00 23.27      A
ATOM    766  CA  LYS A 163      33.503  11.017   3.080  1.00 27.12      A
ATOM    767  CB  LYS A 163      32.663   9.741   2.963  1.00 29.68      A
ATOM    768  CG  LYS A 163      33.455   8.524   2.515  1.00 37.67      A
ATOM    769  CD  LYS A 163      32.556   7.310   2.321  1.00 42.24      A
ATOM    770  CE  LYS A 163      33.373   6.034   2.185  1.00 44.48      A
ATOM    771  NZ  LYS A 163      34.143   5.735   3.430  1.00 44.88      A
ATOM    772  C   LYS A 163      32.581  12.186   3.411  1.00 25.78      A
ATOM    773  O   LYS A 163      32.103  12.863   2.506  1.00 26.53      A
ATOM    774  N   ASN A 164      32.327  12.441   4.689  1.00 24.57      A
ATOM    775  CA  ASN A 164      31.420  13.522   5.033  1.00 23.77      A
ATOM    776  CB  ASN A 164      30.610  13.129   6.265  1.00 25.02      A
ATOM    777  CG  ASN A 164      29.537  12.101   5.932  1.00 27.54      A
ATOM    778  OD1 ASN A 164      28.772  12.281   4.983  1.00 28.79      A
ATOM    779  ND2 ASN A 164      29.475  11.024   6.704  1.00 27.13      A
ATOM    780  C   ASN A 164      31.999  14.931   5.169  1.00 24.43      A
ATOM    781  O   ASN A 164      31.306  15.856   5.589  1.00 23.98      A
ATOM    782  N   GLY A 165      33.262  15.097   4.795  1.00 21.56      A
ATOM    783  CA  GLY A 165      33.873  16.414   4.836  1.00 24.39      A
ATOM    784  C   GLY A 165      34.191  17.043   6.181  1.00 23.62      A
ATOM    785  O   GLY A 165      34.380  16.352   7.177  1.00 23.26      A
ATOM    786  N   GLU A 166      34.234  18.373   6.186  1.00 23.22      A
ATOM    787  CA  GLU A 166      34.563  19.176   7.362  1.00 24.54      A
ATOM    788  CB  GLU A 166      35.055  20.558   6.913  1.00 25.04      A
ATOM    789  CG  GLU A 166      36.419  20.569   6.229  1.00 26.48      A
ATOM    790  CD  GLU A 166      36.699  21.889   5.517  1.00 30.02      A
ATOM    791  OE1 GLU A 166      36.081  22.906   5.889  1.00 29.33      A
ATOM    792  OE2 GLU A 166      37.544  21.916   4.596  1.00 30.48      A
ATOM    793  C   GLU A 166      33.436  19.372   8.369  1.00 24.44      A
ATOM    794  O   GLU A 166      32.279  19.541   8.001  1.00 22.76      A
ATOM    795  N   LEU A 167      33.791  19.370   9.649  1.00 22.95      A
ATOM    796  CA  LEU A 167      32.813  19.581  10.707  1.00 22.26      A
ATOM    797  CB  LEU A 167      33.497  19.481  12.073  1.00 22.32      A
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	ATOM	798	CG	LEU	A	167	32.706	19.923	13.306	1.00	22.04	A
	ATOM	799	CD1	LEU	A	167	31.454	19.074	13.463	1.00	19.66	A
	ATOM	800	CD2	LEU	A	167	33.597	19.805	14.537	1.00	21.17	A
	ATOM	801	C	LEU	A	167	32.193	20.971	10.529	1.00	23.49	A
5	ATOM	802	O	LEU	A	167	31.047	21.209	10.907	1.00	23.56	A
	ATOM	803	N	LEU	A	168	32.960	21.887	9.948	1.00	24.25	A
	ATOM	804	CA	LEU	A	168	32.473	23.245	9.722	1.00	26.64	A
	ATOM	805	CB	LEU	A	168	33.560	24.099	9.066	1.00	25.62	A
	ATOM	806	CG	LEU	A	168	33.198	25.546	8.707	1.00	27.34	A
10	ATOM	807	CD1	LEU	A	168	32.718	26.296	9.946	1.00	26.42	A
	ATOM	808	CD2	LEU	A	168	34.418	26.238	8.119	1.00	26.74	A
	ATOM	809	C	LEU	A	168	31.234	23.218	8.829	1.00	27.13	A
	ATOM	810	O	LEU	A	168	30.297	23.989	9.030	1.00	26.01	A
	ATOM	811	N	LYS	A	169	31.233	22.320	7.848	1.00	26.41	A
15	ATOM	812	CA	LYS	A	169	30.106	22.210	6.934	1.00	27.70	A
	ATOM	813	CB	LYS	A	169	30.324	21.064	5.945	1.00	30.49	A
	ATOM	814	CG	LYS	A	169	29.151	20.854	4.993	1.00	32.47	A
	ATOM	815	CD	LYS	A	169	29.407	19.728	3.998	1.00	35.98	A
	ATOM	816	CE	LYS	A	169	29.462	18.372	4.683	1.00	38.53	A
20	ATOM	817	NZ	LYS	A	169	29.622	17.263	3.702	1.00	41.00	A
	ATOM	818	C	LYS	A	169	28.801	21.985	7.682	1.00	28.12	A
	ATOM	819	O	LYS	A	169	27.785	22.608	7.371	1.00	28.08	A
	ATOM	820	N	TYR	A	170	28.826	21.094	8.668	1.00	26.53	A
	ATOM	821	CA	TYR	A	170	27.624	20.791	9.434	1.00	26.95	A
25	ATOM	822	CB	TYR	A	170	27.810	19.476	10.193	1.00	25.03	A
	ATOM	823	CG	TYR	A	170	27.898	18.300	9.251	1.00	26.65	A
	ATOM	824	CD1	TYR	A	170	26.745	17.661	8.790	1.00	28.27	A
	ATOM	825	CE1	TYR	A	170	26.814	16.642	7.839	1.00	26.85	A
	ATOM	826	CD2	TYR	A	170	29.127	17.884	8.742	1.00	27.83	A
30	ATOM	827	CE2	TYR	A	170	29.209	16.869	7.792	1.00	27.19	A
	ATOM	828	CZ	TYR	A	170	28.049	16.254	7.343	1.00	30.02	A
	ATOM	829	OH	TYR	A	170	28.130	15.268	6.382	1.00	29.23	A
	ATOM	830	C	TYR	A	170	27.229	21.918	10.376	1.00	27.59	A
	ATOM	831	O	TYR	A	170	26.045	22.122	10.642	1.00	29.25	A
35	ATOM	832	N	ILE	A	171	28.208	22.660	10.882	1.00	28.16	A
	ATOM	833	CA	ILE	A	171	27.883	23.770	11.763	1.00	29.03	A
	ATOM	834	CB	ILE	A	171	29.151	24.435	12.337	1.00	27.51	A
	ATOM	835	CG2	ILE	A	171	28.773	25.705	13.084	1.00	27.97	A
	ATOM	836	CG1	ILE	A	171	29.872	23.458	13.272	1.00	26.70	A
40	ATOM	837	CD1	ILE	A	171	31.163	23.996	13.856	1.00	24.07	A
	ATOM	838	C	ILE	A	171	27.094	24.796	10.944	1.00	31.41	A
	ATOM	839	O	ILE	A	171	26.088	25.335	11.407	1.00	31.69	A
	ATOM	840	N	ARG	A	172	27.546	25.047	9.719	1.00	33.21	A
	ATOM	841	CA	ARG	A	172	26.874	26.000	8.844	1.00	36.54	A
45	ATOM	842	CB	ARG	A	172	27.734	26.314	7.616	1.00	37.73	A
	ATOM	843	CG	ARG	A	172	29.057	27.011	7.912	1.00	41.65	A
	ATOM	844	CD	ARG	A	172	29.708	27.492	6.616	1.00	45.29	A
	ATOM	845	NE	ARG	A	172	31.037	28.070	6.812	1.00	48.51	A
	ATOM	846	CZ	ARG	A	172	31.314	29.059	7.658	1.00	51.53	A
50	ATOM	847	NH1	ARG	A	172	30.355	29.593	8.406	1.00	53.75	A
	ATOM	848	NH2	ARG	A	172	32.553	29.526	7.748	1.00	51.21	A
	ATOM	849	C	ARG	A	172	25.528	25.459	8.378	1.00	37.67	A
	ATOM	850	O	ARG	A	172	24.550	26.200	8.288	1.00	39.09	A
	ATOM	851	N	LYS	A	173	25.481	24.163	8.092	1.00	38.44	A
55	ATOM	852	CA	LYS	A	173	24.259	23.528	7.619	1.00	39.25	A
	ATOM	853	CB	LYS	A	173	24.523	22.061	7.272	1.00	41.89	A
	ATOM	854	CG	LYS	A	173	23.279	21.298	6.830	1.00	45.52	A
	ATOM	855	CD	LYS	A	173	23.557	19.808	6.653	1.00	49.60	A
	ATOM	856	CE	LYS	A	173	24.477	19.530	5.469	1.00	52.63	A

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ATOM    857  NZ  LYS A 173      23.855  19.894   4.160  1.00 54.61      A
ATOM    858  C   LYS A 173      23.089  23.608   8.595  1.00 39.30      A
ATOM    859  O   LYS A 173      21.981  23.960   8.201  1.00 39.62      A
ATOM    860  N   ILE A 174      23.320  23.282   9.863  1.00 37.96      A
ATOM    861  CA  ILE A 174      22.229  23.314  10.833  1.00 37.36      A
ATOM    862  CB  ILE A 174      22.159  21.998  11.652  1.00 37.44      A
ATOM    863  CG2 ILE A 174      22.058  20.802  10.709  1.00 38.37      A
ATOM    864  CG1 ILE A 174      23.397  21.850  12.532  1.00 37.25      A
ATOM    865  CD1 ILE A 174      23.355  20.620  13.418  1.00 36.85      A
ATOM    866  C   ILE A 174      22.259  24.492  11.801  1.00 36.71      A
ATOM    867  O   ILE A 174      21.448  24.556  12.724  1.00 38.05      A
ATOM    868  N   GLY A 175      23.185  25.423  11.592  1.00 35.48      A
ATOM    869  CA  GLY A 175      23.265  26.585  12.462  1.00 35.29      A
ATOM    870  C   GLY A 175      24.053  26.360  13.737  1.00 35.06      A
ATOM    871  O   GLY A 175      25.066  27.019  13.970  1.00 37.46      A
ATOM    872  N   SER A 176      23.581  25.441  14.571  1.00 33.94      A
ATOM    873  CA  SER A 176      24.253  25.113  15.822  1.00 32.84      A
ATOM    874  CB  SER A 176      23.938  26.155  16.901  1.00 33.54      A
ATOM    875  OG  SER A 176      22.599  26.056  17.347  1.00 34.86      A
ATOM    876  C   SER A 176      23.796  23.731  16.276  1.00 32.34      A
ATOM    877  O   SER A 176      22.726  23.263  15.884  1.00 32.82      A
ATOM    878  N   PHE A 177      24.609  23.085  17.103  1.00 29.39      A
ATOM    879  CA  PHE A 177      24.313  21.743  17.597  1.00 27.20      A
ATOM    880  CB  PHE A 177      25.621  20.989  17.865  1.00 26.39      A
ATOM    881  CG  PHE A 177      26.372  20.585  16.622  1.00 26.18      A
ATOM    882  CD1 PHE A 177      26.210  21.277  15.426  1.00 25.30      A
ATOM    883  CD2 PHE A 177      27.266  19.516  16.662  1.00 26.05      A
ATOM    884  CE1 PHE A 177      26.923  20.912  14.290  1.00 26.59      A
ATOM    885  CE2 PHE A 177      27.986  19.143  15.532  1.00 26.06      A
ATOM    886  CZ  PHE A 177      27.815  19.841  14.343  1.00 25.42      A
ATOM    887  C   PHE A 177      23.500  21.752  18.884  1.00 27.00      A
ATOM    888  O   PHE A 177      23.704  22.610  19.747  1.00 26.48      A
ATOM    889  N   ASP A 178      22.578  20.802  19.022  1.00 26.70      A
ATOM    890  CA  ASP A 178      21.816  20.729  20.260  1.00 26.35      A
ATOM    891  CB  ASP A 178      20.621  19.773  20.142  1.00 29.90      A
ATOM    892  CG  ASP A 178      21.020  18.372  19.720  1.00 32.28      A
ATOM    893  OD1 ASP A 178      22.157  17.949  20.014  1.00 35.21      A
ATOM    894  OD2 ASP A 178      20.179  17.683  19.105  1.00 34.79      A
ATOM    895  C   ASP A 178      22.810  20.228  21.311  1.00 25.03      A
ATOM    896  O   ASP A 178      23.974  19.968  20.992  1.00 21.24      A
ATOM    897  N   GLU A 179      22.361  20.083  22.552  1.00 23.60      A
ATOM    898  CA  GLU A 179      23.247  19.644  23.619  1.00 25.18      A
ATOM    899  CB  GLU A 179      22.542  19.770  24.971  1.00 27.60      A
ATOM    900  CG  GLU A 179      23.324  19.176  26.130  1.00 32.58      A
ATOM    901  CD  GLU A 179      22.997  19.845  27.449  1.00 35.82      A
ATOM    902  OE1 GLU A 179      21.825  20.224  27.645  1.00 35.95      A
ATOM    903  OE2 GLU A 179      23.912  19.984  28.291  1.00 38.19      A
ATOM    904  C   GLU A 179      23.808  18.235  23.450  1.00 24.08      A
ATOM    905  O   GLU A 179      24.977  17.989  23.756  1.00 22.79      A
ATOM    906  N   THR A 180      22.983  17.316  22.961  1.00 23.36      A
ATOM    907  CA  THR A 180      23.412  15.935  22.761  1.00 22.15      A
ATOM    908  CB  THR A 180      22.224  15.054  22.320  1.00 23.77      A
ATOM    909  OG1 THR A 180      21.222  15.075  23.341  1.00 26.37      A
ATOM    910  CG2 THR A 180      22.670  13.616  22.088  1.00 22.66      A
ATOM    911  C   THR A 180      24.533  15.830  21.724  1.00 22.01      A
ATOM    912  O   THR A 180      25.533  15.141  21.944  1.00 19.87      A
ATOM    913  N   CYS A 181      24.365  16.511  20.596  1.00 21.21      A
ATOM    914  CA  CYS A 181      25.372  16.480  19.541  1.00 22.22      A
ATOM    915  CB  CYS A 181      24.800  17.065  18.250  1.00 24.62      A
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ATOM	916	SG	CYS	A	181	23.435	16.080	17.560	1.00	29.50	A
ATOM	917	C	CYS	A	181	26.633	17.232	19.954	1.00	23.07	A
ATOM	918	O	CYS	A	181	27.746	16.827	19.608	1.00	23.95	A
ATOM	919	N	THR	A	182	26.463	18.325	20.695	1.00	22.76	A
ATOM	920	CA	THR	A	182	27.606	19.103	21.161	1.00	21.49	A
ATOM	921	CB	THR	A	182	27.167	20.346	21.978	1.00	21.37	A
ATOM	922	OG1	THR	A	182	26.459	21.262	21.134	1.00	22.50	A
ATOM	923	CG2	THR	A	182	28.379	21.046	22.565	1.00	18.36	A
ATOM	924	C	THR	A	182	28.454	18.215	22.071	1.00	21.48	A
ATOM	925	O	THR	A	182	29.669	18.090	21.894	1.00	19.95	A
ATOM	926	N	ARG	A	183	27.798	17.602	23.050	1.00	18.97	A
ATOM	927	CA	ARG	A	183	28.468	16.723	23.996	1.00	19.39	A
ATOM	928	CB	ARG	A	183	27.455	16.140	24.984	1.00	19.46	A
ATOM	929	CG	ARG	A	183	28.030	15.062	25.887	1.00	18.77	A
ATOM	930	CD	ARG	A	183	27.021	14.571	26.925	1.00	21.19	A
ATOM	931	NE	ARG	A	183	26.605	15.642	27.824	1.00	19.46	A
ATOM	932	CZ	ARG	A	183	25.496	16.362	27.679	1.00	20.45	A
ATOM	933	NH1	ARG	A	183	24.672	16.123	26.666	1.00	19.81	A
ATOM	934	NH2	ARG	A	183	25.224	17.338	28.539	1.00	17.11	A
ATOM	935	C	ARG	A	183	29.206	15.577	23.302	1.00	20.02	A
ATOM	936	O	ARG	A	183	30.383	15.333	23.573	1.00	19.97	A
ATOM	937	N	PHE	A	184	28.520	14.871	22.409	1.00	19.24	A
ATOM	938	CA	PHE	A	184	29.144	13.746	21.722	1.00	18.04	A
ATOM	939	CB	PHE	A	184	28.158	13.078	20.764	1.00	21.05	A
ATOM	940	CG	PHE	A	184	28.719	11.857	20.098	1.00	22.67	A
ATOM	941	CD1	PHE	A	184	28.717	10.630	20.754	1.00	22.97	A
ATOM	942	CD2	PHE	A	184	29.317	11.949	18.850	1.00	19.97	A
ATOM	943	CE1	PHE	A	184	29.308	9.510	20.176	1.00	23.53	A
ATOM	944	CE2	PHE	A	184	29.915	10.833	18.263	1.00	24.11	A
ATOM	945	CZ	PHE	A	184	29.910	9.613	18.928	1.00	22.97	A
ATOM	946	C	PHE	A	184	30.403	14.127	20.941	1.00	17.99	A
ATOM	947	O	PHE	A	184	31.461	13.531	21.130	1.00	18.89	A
ATOM	948	N	TYR	A	185	30.292	15.110	20.056	1.00	15.73	A
ATOM	949	CA	TYR	A	185	31.443	15.519	19.265	1.00	15.72	A
ATOM	950	CB	TYR	A	185	30.992	16.413	18.111	1.00	17.33	A
ATOM	951	CG	TYR	A	185	30.364	15.584	17.015	1.00	19.37	A
ATOM	952	CD1	TYR	A	185	31.159	14.809	16.168	1.00	16.53	A
ATOM	953	CE1	TYR	A	185	30.590	13.952	15.232	1.00	18.12	A
ATOM	954	CD2	TYR	A	185	28.976	15.484	16.892	1.00	18.18	A
ATOM	955	CE2	TYR	A	185	28.398	14.623	15.956	1.00	18.90	A
ATOM	956	CZ	TYR	A	185	29.211	13.861	15.133	1.00	18.41	A
ATOM	957	OH	TYR	A	185	28.650	12.995	14.218	1.00	20.48	A
ATOM	958	C	TYR	A	185	32.544	16.172	20.083	1.00	15.79	A
ATOM	959	O	TYR	A	185	33.720	16.015	19.766	1.00	17.69	A
ATOM	960	N	THR	A	186	32.176	16.887	21.142	1.00	15.68	A
ATOM	961	CA	THR	A	186	33.184	17.504	21.997	1.00	16.03	A
ATOM	962	CB	THR	A	186	32.559	18.403	23.094	1.00	16.62	A
ATOM	963	OG1	THR	A	186	31.866	19.503	22.481	1.00	14.79	A
ATOM	964	CG2	THR	A	186	33.656	18.953	24.019	1.00	14.68	A
ATOM	965	C	THR	A	186	33.954	16.375	22.680	1.00	15.59	A
ATOM	966	O	THR	A	186	35.176	16.443	22.823	1.00	13.77	A
ATOM	967	N	ALA	A	187	33.234	15.333	23.097	1.00	14.06	A
ATOM	968	CA	ALA	A	187	33.869	14.196	23.757	1.00	14.74	A
ATOM	969	CB	ALA	A	187	32.810	13.195	24.224	1.00	14.32	A
ATOM	970	C	ALA	A	187	34.875	13.509	22.821	1.00	14.41	A
ATOM	971	O	ALA	A	187	35.972	13.136	23.247	1.00	15.61	A
ATOM	972	N	GLU	A	188	34.516	13.340	21.549	1.00	14.01	A
ATOM	973	CA	GLU	A	188	35.443	12.704	20.615	1.00	13.50	A
ATOM	974	CB	GLU	A	188	34.782	12.449	19.251	1.00	12.85	A

ATOM	975	CG	GLU	A	188	33.622	11.454	19.282	1.00	12.71	A
ATOM	976	CD	GLU	A	188	33.464	10.685	17.979	1.00	15.01	A
ATOM	977	OE1	GLU	A	188	33.687	11.275	16.899	1.00	13.21	A
ATOM	978	OE2	GLU	A	188	33.110	9.484	18.031	1.00	17.69	A
ATOM	979	C	GLU	A	188	36.682	13.582	20.436	1.00	13.34	A
ATOM	980	O	GLU	A	188	37.803	13.085	20.408	1.00	14.69	A
ATOM	981	N	ILE	A	189	36.486	14.893	20.326	1.00	13.52	A
ATOM	982	CA	ILE	A	189	37.627	15.787	20.159	1.00	13.35	A
ATOM	983	CB	ILE	A	189	37.169	17.247	19.939	1.00	13.95	A
ATOM	984	CG2	ILE	A	189	38.381	18.165	19.822	1.00	12.47	A
ATOM	985	CG1	ILE	A	189	36.302	17.332	18.671	1.00	13.44	A
ATOM	986	CD1	ILE	A	189	35.588	18.664	18.491	1.00	14.29	A
ATOM	987	C	ILE	A	189	38.530	15.702	21.394	1.00	14.63	A
ATOM	988	O	ILE	A	189	39.753	15.595	21.271	1.00	12.97	A
ATOM	989	N	VAL	A	190	37.927	15.751	22.582	1.00	14.35	A
ATOM	990	CA	VAL	A	190	38.684	15.655	23.832	1.00	13.22	A
ATOM	991	CB	VAL	A	190	37.743	15.690	25.061	1.00	14.28	A
ATOM	992	CG1	VAL	A	190	38.509	15.267	26.326	1.00	15.08	A
ATOM	993	CG2	VAL	A	190	37.160	17.082	25.233	1.00	12.08	A
ATOM	994	C	VAL	A	190	39.468	14.338	23.859	1.00	14.61	A
ATOM	995	O	VAL	A	190	40.634	14.304	24.250	1.00	13.72	A
ATOM	996	N	SER	A	191	38.825	13.254	23.432	1.00	15.26	A
ATOM	997	CA	SER	A	191	39.478	11.943	23.421	1.00	16.81	A
ATOM	998	CB	SER	A	191	38.470	10.857	23.041	1.00	16.14	A
ATOM	999	OG	SER	A	191	39.018	9.569	23.238	1.00	16.94	A
ATOM	1000	C	SER	A	191	40.649	11.928	22.441	1.00	16.58	A
ATOM	1001	O	SER	A	191	41.697	11.335	22.713	1.00	13.96	A
ATOM	1002	N	ALA	A	192	40.468	12.586	21.300	1.00	15.26	A
ATOM	1003	CA	ALA	A	192	41.518	12.645	20.292	1.00	14.37	A
ATOM	1004	CB	ALA	A	192	40.989	13.296	19.016	1.00	14.43	A
ATOM	1005	C	ALA	A	192	42.695	13.440	20.845	1.00	16.46	A
ATOM	1006	O	ALA	A	192	43.851	13.038	20.697	1.00	17.96	A
ATOM	1007	N	LEU	A	193	42.401	14.563	21.496	1.00	15.02	A
ATOM	1008	CA	LEU	A	193	43.459	15.392	22.067	1.00	15.42	A
ATOM	1009	CB	LEU	A	193	42.884	16.712	22.600	1.00	12.88	A
ATOM	1010	CG	LEU	A	193	42.445	17.721	21.525	1.00	15.97	A
ATOM	1011	CD1	LEU	A	193	41.869	18.979	22.190	1.00	13.97	A
ATOM	1012	CD2	LEU	A	193	43.642	18.088	20.655	1.00	14.58	A
ATOM	1013	C	LEU	A	193	44.211	14.659	23.174	1.00	14.49	A
ATOM	1014	O	LEU	A	193	45.427	14.813	23.310	1.00	16.56	A
ATOM	1015	N	GLU	A	194	43.500	13.870	23.975	1.00	13.96	A
ATOM	1016	CA	GLU	A	194	44.179	13.123	25.032	1.00	14.08	A
ATOM	1017	CB	GLU	A	194	43.190	12.295	25.857	1.00	14.65	A
ATOM	1018	CG	GLU	A	194	43.882	11.301	26.789	1.00	17.09	A
ATOM	1019	CD	GLU	A	194	42.924	10.592	27.730	1.00	19.59	A
ATOM	1020	OE1	GLU	A	194	41.809	10.237	27.295	1.00	19.25	A
ATOM	1021	OE2	GLU	A	194	43.302	10.380	28.906	1.00	20.20	A
ATOM	1022	C	GLU	A	194	45.208	12.199	24.386	1.00	13.57	A
ATOM	1023	O	GLU	A	194	46.337	12.093	24.847	1.00	14.23	A
ATOM	1024	N	TYR	A	195	44.822	11.544	23.301	1.00	14.89	A
ATOM	1025	CA	TYR	A	195	45.743	10.642	22.618	1.00	16.58	A
ATOM	1026	CB	TYR	A	195	45.030	9.910	21.488	1.00	17.29	A
ATOM	1027	CG	TYR	A	195	45.956	9.058	20.649	1.00	17.92	A
ATOM	1028	CD1	TYR	A	195	46.347	7.788	21.077	1.00	17.96	A
ATOM	1029	CE1	TYR	A	195	47.203	6.996	20.304	1.00	19.77	A
ATOM	1030	CD2	TYR	A	195	46.445	9.524	19.428	1.00	16.67	A
ATOM	1031	CE2	TYR	A	195	47.299	8.744	18.650	1.00	18.51	A
ATOM	1032	CZ	TYR	A	195	47.671	7.481	19.094	1.00	20.24	A
ATOM	1033	OH	TYR	A	195	48.506	6.705	18.325	1.00	21.89	A

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ATOM   1034  C   TYR A 195      46.917  11.419  22.035  1.00 16.98      A
ATOM   1035  O   TYR A 195      48.081  11.047  22.203  1.00 14.61      A
ATOM   1036  N   LEU A 196      46.599  12.507  21.347  1.00 16.30      A
ATOM   1037  CA  LEU A 196      47.619  13.328  20.720  1.00 18.15      A
ATOM   1038  CB  LEU A 196      46.969  14.502  19.982  1.00 18.59      A
ATOM   1039  CG  LEU A 196      47.834  15.203  18.935  1.00 22.51      A
ATOM   1040  CD1 LEU A 196      48.222  14.206  17.841  1.00 20.94      A
ATOM   1041  CD2 LEU A 196      47.060  16.375  18.338  1.00 22.98      A
ATOM   1042  C   LEU A 196      48.592  13.844  21.763  1.00 17.75      A
ATOM   1043  O   LEU A 196      49.801  13.644  21.649  1.00 18.33      A
ATOM   1044  N   HIS A 197      48.064  14.495  22.792  1.00 17.12      A
ATOM   1045  CA  HIS A 197      48.913  15.042  23.842  1.00 18.47      A
ATOM   1046  CB  HIS A 197      48.069  15.866  24.817  1.00 15.90      A
ATOM   1047  CG  HIS A 197      47.571  17.152  24.231  1.00 19.15      A
ATOM   1048  CD2 HIS A 197      47.830  17.745  23.038  1.00 18.22      A
ATOM   1049  ND1 HIS A 197      46.704  17.992  24.897  1.00 17.47      A
ATOM   1050  CE1 HIS A 197      46.450  19.047  24.139  1.00 19.74      A
ATOM   1051  NE2 HIS A 197      47.119  18.921  23.007  1.00 15.69      A
ATOM   1052  C   HIS A 197      49.696  13.958  24.572  1.00 19.40      A
ATOM   1053  O   HIS A 197      50.823  14.192  25.021  1.00 19.42      A
ATOM   1054  N   GLY A 198      49.106  12.770  24.679  1.00 18.59      A
ATOM   1055  CA  GLY A 198      49.793  11.675  25.339  1.00 19.60      A
ATOM   1056  C   GLY A 198      51.075  11.307  24.612  1.00 21.86      A
ATOM   1057  O   GLY A 198      51.963  10.682  25.186  1.00 23.09      A
ATOM   1058  N   LYS A 199      51.174  11.687  23.341  1.00 22.81      A
ATOM   1059  CA  LYS A 199      52.368  11.401  22.549  1.00 24.43      A
ATOM   1060  CB  LYS A 199      51.990  10.905  21.154  1.00 26.00      A
ATOM   1061  CG  LYS A 199      51.378   9.520  21.133  1.00 30.98      A
ATOM   1062  CD  LYS A 199      51.291   9.002  19.708  1.00 36.85      A
ATOM   1063  CE  LYS A 199      50.832   7.559  19.682  1.00 40.37      A
ATOM   1064  NZ  LYS A 199      51.646   6.691  20.581  1.00 43.48      A
ATOM   1065  C   LYS A 199      53.253  12.631  22.414  1.00 23.88      A
ATOM   1066  O   LYS A 199      54.144  12.669  21.568  1.00 24.97      A
ATOM   1067  N   GLY A 200      52.997  13.638  23.243  1.00 24.00      A
ATOM   1068  CA  GLY A 200      53.790  14.853  23.203  1.00 22.12      A
ATOM   1069  C   GLY A 200      53.665  15.632  21.907  1.00 22.14      A
ATOM   1070  O   GLY A 200      54.632  16.231  21.439  1.00 22.41      A
ATOM   1071  N   ILE A 201      52.475  15.630  21.320  1.00 20.00      A
ATOM   1072  CA  ILE A 201      52.252  16.355  20.080  1.00 18.93      A
ATOM   1073  CB  ILE A 201      51.784  15.414  18.955  1.00 19.70      A
ATOM   1074  CG2 ILE A 201      51.414  16.226  17.716  1.00 20.12      A
ATOM   1075  CG1 ILE A 201      52.880  14.395  18.636  1.00 20.03      A
ATOM   1076  CD1 ILE A 201      52.408  13.258  17.745  1.00 22.75      A
ATOM   1077  C   ILE A 201      51.193  17.425  20.270  1.00 19.87      A
ATOM   1078  O   ILE A 201      50.121  17.161  20.817  1.00 20.08      A
ATOM   1079  N   ILE A 202      51.508  18.633  19.815  1.00 19.94      A
ATOM   1080  CA  ILE A 202      50.601  19.772  19.891  1.00 20.45      A
ATOM   1081  CB  ILE A 202      51.352  21.040  20.356  1.00 22.21      A
ATOM   1082  CG2 ILE A 202      50.381  22.220  20.470  1.00 22.67      A
ATOM   1083  CG1 ILE A 202      52.033  20.775  21.700  1.00 24.19      A
ATOM   1084  CD1 ILE A 202      52.914  21.920  22.169  1.00 25.39      A
ATOM   1085  C   ILE A 202      50.105  19.999  18.464  1.00 20.71      A
ATOM   1086  O   ILE A 202      50.910  20.067  17.538  1.00 19.48      A
ATOM   1087  N   HIS A 203      48.795  20.108  18.270  1.00 18.65      A
ATOM   1088  CA  HIS A 203      48.280  20.319  16.919  1.00 18.02      A
ATOM   1089  CB  HIS A 203      46.775  20.057  16.874  1.00 16.31      A
ATOM   1090  CG  HIS A 203      46.199  20.136  15.495  1.00 18.36      A
ATOM   1091  CD2 HIS A 203      46.043  21.186  14.655  1.00 16.42      A
ATOM   1092  ND1 HIS A 203      45.759  19.026  14.806  1.00 19.50      A
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ATOM	1093	CE1	HIS	A	203	45.359	19.389	13.600	1.00	17.64	A
ATOM	1094	NE2	HIS	A	203	45.522	20.694	13.483	1.00	20.87	A
ATOM	1095	C	HIS	A	203	48.589	21.738	16.405	1.00	18.92	A
ATOM	1096	O	HIS	A	203	49.073	21.906	15.282	1.00	16.21	A
ATOM	1097	N	ARG	A	204	48.301	22.744	17.232	1.00	18.60	A
ATOM	1098	CA	ARG	A	204	48.552	24.157	16.914	1.00	19.81	A
ATOM	1099	CB	ARG	A	204	49.998	24.365	16.458	1.00	21.61	A
ATOM	1100	CG	ARG	A	204	51.024	24.137	17.550	1.00	23.82	A
ATOM	1101	CD	ARG	A	204	52.323	24.870	17.252	1.00	27.62	A
ATOM	1102	NE	ARG	A	204	52.932	24.449	15.994	1.00	29.43	A
ATOM	1103	CZ	ARG	A	204	54.125	24.861	15.572	1.00	33.10	A
ATOM	1104	NH1	ARG	A	204	54.835	25.706	16.311	1.00	32.12	A
ATOM	1105	NH2	ARG	A	204	54.614	24.426	14.418	1.00	30.25	A
ATOM	1106	C	ARG	A	204	47.624	24.830	15.905	1.00	20.03	A
ATOM	1107	O	ARG	A	204	47.711	26.038	15.698	1.00	20.88	A
ATOM	1108	N	ASP	A	205	46.755	24.071	15.255	1.00	18.96	A
ATOM	1109	CA	ASP	A	205	45.828	24.692	14.325	1.00	17.90	A
ATOM	1110	CB	ASP	A	205	46.418	24.741	12.914	1.00	18.95	A
ATOM	1111	CG	ASP	A	205	45.655	25.688	12.008	1.00	20.36	A
ATOM	1112	OD1	ASP	A	205	44.939	26.560	12.545	1.00	20.35	A
ATOM	1113	OD2	ASP	A	205	45.772	25.573	10.771	1.00	22.49	A
ATOM	1114	C	ASP	A	205	44.500	23.956	14.328	1.00	19.60	A
ATOM	1115	O	ASP	A	205	43.876	23.751	13.287	1.00	21.53	A
ATOM	1116	N	LEU	A	206	44.063	23.569	15.521	1.00	18.53	A
ATOM	1117	CA	LEU	A	206	42.813	22.851	15.667	1.00	19.18	A
ATOM	1118	CB	LEU	A	206	42.693	22.295	17.087	1.00	18.94	A
ATOM	1119	CG	LEU	A	206	41.511	21.358	17.346	1.00	23.10	A
ATOM	1120	CD1	LEU	A	206	41.615	20.142	16.436	1.00	23.01	A
ATOM	1121	CD2	LEU	A	206	41.504	20.933	18.808	1.00	22.97	A
ATOM	1122	C	LEU	A	206	41.639	23.772	15.361	1.00	19.05	A
ATOM	1123	O	LEU	A	206	41.556	24.880	15.886	1.00	19.25	A
ATOM	1124	N	LYS	A	207	40.740	23.307	14.500	1.00	17.54	A
ATOM	1125	CA	LYS	A	207	39.564	24.081	14.110	1.00	18.60	A
ATOM	1126	CB	LYS	A	207	39.980	25.248	13.196	1.00	18.98	A
ATOM	1127	CG	LYS	A	207	40.786	24.817	11.982	1.00	18.20	A
ATOM	1128	CD	LYS	A	207	41.246	26.000	11.139	1.00	21.42	A
ATOM	1129	CE	LYS	A	207	42.223	25.537	10.062	1.00	23.21	A
ATOM	1130	NZ	LYS	A	207	42.561	26.604	9.084	1.00	29.61	A
ATOM	1131	C	LYS	A	207	38.566	23.181	13.388	1.00	18.18	A
ATOM	1132	O	LYS	A	207	38.921	22.100	12.915	1.00	18.11	A
ATOM	1133	N	PRO	A	208	37.298	23.614	13.293	1.00	20.26	A
ATOM	1134	CD	PRO	A	208	36.713	24.833	13.882	1.00	18.79	A
ATOM	1135	CA	PRO	A	208	36.272	22.814	12.616	1.00	19.67	A
ATOM	1136	CB	PRO	A	208	35.063	23.742	12.608	1.00	19.45	A
ATOM	1137	CG	PRO	A	208	35.231	24.509	13.891	1.00	21.81	A
ATOM	1138	C	PRO	A	208	36.674	22.372	11.209	1.00	21.04	A
ATOM	1139	O	PRO	A	208	36.264	21.307	10.751	1.00	21.19	A
ATOM	1140	N	GLU	A	209	37.474	23.188	10.528	1.00	21.69	A
ATOM	1141	CA	GLU	A	209	37.928	22.872	9.170	1.00	22.64	A
ATOM	1142	CB	GLU	A	209	38.644	24.084	8.558	1.00	23.65	A
ATOM	1143	CG	GLU	A	209	39.253	23.825	7.185	1.00	27.24	A
ATOM	1144	CD	GLU	A	209	40.155	24.958	6.716	1.00	29.40	A
ATOM	1145	OE1	GLU	A	209	39.660	26.094	6.553	1.00	29.68	A
ATOM	1146	OE2	GLU	A	209	41.363	24.711	6.511	1.00	30.07	A
ATOM	1147	C	GLU	A	209	38.879	21.668	9.159	1.00	22.28	A
ATOM	1148	O	GLU	A	209	38.955	20.933	8.170	1.00	21.36	A
ATOM	1149	N	ASN	A	210	39.600	21.490	10.263	1.00	19.90	A
ATOM	1150	CA	ASN	A	210	40.574	20.412	10.436	1.00	19.44	A
ATOM	1151	CB	ASN	A	210	41.744	20.912	11.287	1.00	20.07	A

ATOM	1152	CG	ASN	A	210	42.746	21.698	10.479	1.00	25.77	A
ATOM	1153	OD1	ASN	A	210	43.571	22.427	11.029	1.00	26.73	A
ATOM	1154	ND2	ASN	A	210	42.687	21.548	9.158	1.00	25.15	A
ATOM	1155	C	ASN	A	210	40.005	19.151	11.078	1.00	18.63	A
ATOM	1156	O	ASN	A	210	40.712	18.154	11.234	1.00	18.29	A
ATOM	1157	N	ILE	A	211	38.739	19.202	11.469	1.00	16.31	A
ATOM	1158	CA	ILE	A	211	38.090	18.058	12.085	1.00	15.49	A
ATOM	1159	CB	ILE	A	211	37.336	18.488	13.354	1.00	15.40	A
ATOM	1160	CG2	ILE	A	211	36.582	17.311	13.950	1.00	14.59	A
ATOM	1161	CG1	ILE	A	211	38.342	19.046	14.365	1.00	15.91	A
ATOM	1162	CD1	ILE	A	211	37.720	19.669	15.590	1.00	15.98	A
ATOM	1163	C	ILE	A	211	37.131	17.485	11.059	1.00	17.26	A
ATOM	1164	O	ILE	A	211	35.995	17.947	10.926	1.00	18.16	A
ATOM	1165	N	LEU	A	212	37.599	16.486	10.317	1.00	15.97	A
ATOM	1166	CA	LEU	A	212	36.784	15.875	9.274	1.00	17.08	A
ATOM	1167	CB	LEU	A	212	37.685	15.249	8.202	1.00	17.78	A
ATOM	1168	CG	LEU	A	212	38.785	16.157	7.640	1.00	18.92	A
ATOM	1169	CD1	LEU	A	212	39.476	15.450	6.485	1.00	22.09	A
ATOM	1170	CD2	LEU	A	212	38.188	17.482	7.166	1.00	19.91	A
ATOM	1171	C	LEU	A	212	35.843	14.825	9.837	1.00	18.35	A
ATOM	1172	O	LEU	A	212	35.957	14.433	11.002	1.00	19.39	A
ATOM	1173	N	LEU	A	213	34.915	14.368	9.000	1.00	17.84	A
ATOM	1174	CA	LEU	A	213	33.942	13.362	9.403	1.00	19.94	A
ATOM	1175	CB	LEU	A	213	32.556	14.004	9.487	1.00	20.84	A
ATOM	1176	CG	LEU	A	213	32.396	15.059	10.583	1.00	20.31	A
ATOM	1177	CD1	LEU	A	213	31.124	15.837	10.367	1.00	22.75	A
ATOM	1178	CD2	LEU	A	213	32.379	14.378	11.940	1.00	23.93	A
ATOM	1179	C	LEU	A	213	33.914	12.187	8.426	1.00	20.98	A
ATOM	1180	O	LEU	A	213	33.743	12.379	7.218	1.00	19.55	A
ATOM	1181	N	ASN	A	214	34.088	10.970	8.935	1.00	20.44	A
ATOM	1182	CA	ASN	A	214	34.055	9.814	8.049	1.00	23.77	A
ATOM	1183	CB	ASN	A	214	34.745	8.596	8.674	1.00	25.30	A
ATOM	1184	CG	ASN	A	214	34.077	8.127	9.948	1.00	32.04	A
ATOM	1185	OD1	ASN	A	214	32.908	8.422	10.206	1.00	34.43	A
ATOM	1186	ND2	ASN	A	214	34.818	7.369	10.752	1.00	33.85	A
ATOM	1187	C	ASN	A	214	32.618	9.466	7.693	1.00	24.07	A
ATOM	1188	O	ASN	A	214	31.672	10.113	8.150	1.00	19.94	A
ATOM	1189	N	GLU	A	215	32.459	8.433	6.879	1.00	25.77	A
ATOM	1190	CA	GLU	A	215	31.138	8.003	6.445	1.00	28.69	A
ATOM	1191	CB	GLU	A	215	31.275	6.796	5.513	1.00	31.98	A
ATOM	1192	CG	GLU	A	215	29.970	6.334	4.896	1.00	40.22	A
ATOM	1193	CD	GLU	A	215	30.182	5.312	3.795	1.00	44.27	A
ATOM	1194	OE1	GLU	A	215	30.817	4.268	4.065	1.00	46.46	A
ATOM	1195	OE2	GLU	A	215	29.716	5.556	2.660	1.00	46.13	A
ATOM	1196	C	GLU	A	215	30.188	7.673	7.601	1.00	28.41	A
ATOM	1197	O	GLU	A	215	28.971	7.769	7.447	1.00	28.52	A
ATOM	1198	N	ASP	A	216	30.737	7.287	8.752	1.00	26.77	A
ATOM	1199	CA	ASP	A	216	29.914	6.953	9.917	1.00	27.28	A
ATOM	1200	CB	ASP	A	216	30.538	5.795	10.696	1.00	31.27	A
ATOM	1201	CG	ASP	A	216	30.390	4.466	9.979	1.00	37.61	A
ATOM	1202	OD1	ASP	A	216	29.274	4.170	9.499	1.00	39.45	A
ATOM	1203	OD2	ASP	A	216	31.382	3.710	9.902	1.00	41.84	A
ATOM	1204	C	ASP	A	216	29.697	8.135	10.862	1.00	26.37	A
ATOM	1205	O	ASP	A	216	29.136	7.984	11.950	1.00	25.73	A
ATOM	1206	N	MET	A	217	30.156	9.306	10.441	1.00	23.02	A
ATOM	1207	CA	MET	A	217	30.015	10.527	11.218	1.00	21.83	A
ATOM	1208	CB	MET	A	217	28.537	10.789	11.517	1.00	23.24	A
ATOM	1209	CG	MET	A	217	27.742	11.186	10.274	1.00	22.98	A
ATOM	1210	SD	MET	A	217	28.464	12.616	9.430	1.00	27.57	A

	ATOM	1211	CE	MET	A	217	27.679	13.974	10.332	1.00	26.68	A
	ATOM	1212	C	MET	A	217	30.844	10.618	12.502	1.00	21.51	A
	ATOM	1213	O	MET	A	217	30.474	11.323	13.440	1.00	18.62	A
	ATOM	1214	N	HIS	A	218	31.957	9.892	12.544	1.00	20.10	A
5	ATOM	1215	CA	HIS	A	218	32.873	9.964	13.678	1.00	19.86	A
	ATOM	1216	CB	HIS	A	218	33.482	8.594	13.977	1.00	20.21	A
	ATOM	1217	CG	HIS	A	218	32.551	7.667	14.698	1.00	22.40	A
	ATOM	1218	CD2	HIS	A	218	31.910	6.547	14.287	1.00	21.27	A
	ATOM	1219	ND1	HIS	A	218	32.177	7.863	16.011	1.00	19.59	A
10	ATOM	1220	CE1	HIS	A	218	31.348	6.902	16.379	1.00	21.88	A
	ATOM	1221	NE2	HIS	A	218	31.168	6.091	15.351	1.00	22.08	A
	ATOM	1222	C	HIS	A	218	33.947	10.921	13.172	1.00	19.10	A
	ATOM	1223	O	HIS	A	218	34.170	11.004	11.965	1.00	20.31	A
	ATOM	1224	N	ILE	A	219	34.617	11.638	14.067	1.00	17.21	A
15	ATOM	1225	CA	ILE	A	219	35.628	12.586	13.618	1.00	15.26	A
	ATOM	1226	CB	ILE	A	219	35.987	13.614	14.716	1.00	15.38	A
	ATOM	1227	CG2	ILE	A	219	34.722	14.305	15.221	1.00	14.58	A
	ATOM	1228	CG1	ILE	A	219	36.734	12.919	15.864	1.00	14.46	A
	ATOM	1229	CD1	ILE	A	219	37.279	13.885	16.911	1.00	13.74	A
20	ATOM	1230	C	ILE	A	219	36.929	11.944	13.161	1.00	16.21	A
	ATOM	1231	O	ILE	A	219	37.238	10.799	13.500	1.00	15.88	A
	ATOM	1232	N	GLN	A	220	37.677	12.711	12.378	1.00	15.62	A
	ATOM	1233	CA	GLN	A	220	38.980	12.316	11.876	1.00	17.84	A
	ATOM	1234	CB	GLN	A	220	38.872	11.595	10.525	1.00	20.00	A
25	ATOM	1235	CG	GLN	A	220	38.463	10.129	10.659	1.00	26.97	A
	ATOM	1236	CD	GLN	A	220	38.648	9.343	9.372	1.00	29.95	A
	ATOM	1237	OE1	GLN	A	220	37.968	9.590	8.373	1.00	33.12	A
	ATOM	1238	NE2	GLN	A	220	39.578	8.393	9.389	1.00	30.47	A
	ATOM	1239	C	GLN	A	220	39.757	13.610	11.735	1.00	17.00	A
30	ATOM	1240	O	GLN	A	220	39.609	14.339	10.751	1.00	18.27	A
	ATOM	1241	N	ILE	A	221	40.566	13.906	12.746	1.00	14.34	A
	ATOM	1242	CA	ILE	A	221	41.361	15.120	12.753	1.00	14.46	A
	ATOM	1243	CB	ILE	A	221	41.867	15.416	14.175	1.00	12.30	A
	ATOM	1244	CG2	ILE	A	221	42.764	16.656	14.167	1.00	14.78	A
35	ATOM	1245	CG1	ILE	A	221	40.660	15.613	15.102	1.00	13.92	A
	ATOM	1246	CD1	ILE	A	221	41.003	15.901	16.543	1.00	15.06	A
	ATOM	1247	C	ILE	A	221	42.536	14.996	11.783	1.00	15.44	A
	ATOM	1248	O	ILE	A	221	43.106	13.915	11.613	1.00	13.93	A
	ATOM	1249	N	THR	A	222	42.877	16.101	11.127	1.00	15.36	A
40	ATOM	1250	CA	THR	A	222	43.980	16.098	10.174	1.00	17.52	A
	ATOM	1251	CB	THR	A	222	43.470	15.836	8.750	1.00	19.92	A
	ATOM	1252	OG1	THR	A	222	44.587	15.637	7.875	1.00	18.78	A
	ATOM	1253	CG2	THR	A	222	42.630	17.018	8.257	1.00	18.16	A
	ATOM	1254	C	THR	A	222	44.735	17.428	10.192	1.00	19.60	A
45	ATOM	1255	O	THR	A	222	44.509	18.257	11.084	1.00	18.59	A
	ATOM	1256	N	ASP	A	223	45.630	17.610	9.216	1.00	18.69	A
	ATOM	1257	CA	ASP	A	223	46.440	18.825	9.069	1.00	20.12	A
	ATOM	1258	CB	ASP	A	223	45.532	20.065	9.108	1.00	23.51	A
	ATOM	1259	CG	ASP	A	223	46.248	21.335	8.670	1.00	27.09	A
50	ATOM	1260	OD1	ASP	A	223	47.283	21.227	7.975	1.00	26.28	A
	ATOM	1261	OD2	ASP	A	223	45.765	22.438	9.009	1.00	26.15	A
	ATOM	1262	C	ASP	A	223	47.516	18.913	10.150	1.00	21.73	A
	ATOM	1263	O	ASP	A	223	47.439	19.751	11.055	1.00	22.76	A
	ATOM	1264	N	PHE	A	224	48.535	18.063	10.027	1.00	20.75	A
55	ATOM	1265	CA	PHE	A	224	49.611	17.988	11.009	1.00	20.11	A
	ATOM	1266	CB	PHE	A	224	49.805	16.527	11.424	1.00	20.62	A
	ATOM	1267	CG	PHE	A	224	48.682	15.991	12.263	1.00	21.41	A
	ATOM	1268	CD1	PHE	A	224	48.598	16.312	13.614	1.00	23.05	A
	ATOM	1269	CD2	PHE	A	224	47.681	15.212	11.693	1.00	22.27	A

ATOM	1270	CE1	PHE	A	224	47.528	15.868	14.389	1.00	23.30	A
ATOM	1271	CE2	PHE	A	224	46.606	14.763	12.457	1.00	21.11	A
ATOM	1272	CZ	PHE	A	224	46.530	15.093	13.807	1.00	22.02	A
ATOM	1273	C	PHE	A	224	50.957	18.583	10.619	1.00	20.45	A
ATOM	1274	O	PHE	A	224	51.905	18.547	11.407	1.00	20.73	A
ATOM	1275	N	GLY	A	225	51.049	19.125	9.412	1.00	22.02	A
ATOM	1276	CA	GLY	A	225	52.301	19.713	8.981	1.00	22.66	A
ATOM	1277	C	GLY	A	225	52.742	20.822	9.920	1.00	24.99	A
ATOM	1278	O	GLY	A	225	53.939	21.041	10.122	1.00	24.52	A
ATOM	1279	N	THR	A	226	51.779	21.524	10.508	1.00	23.50	A
ATOM	1280	CA	THR	A	226	52.106	22.613	11.416	1.00	25.16	A
ATOM	1281	CB	THR	A	226	51.199	23.829	11.160	1.00	24.76	A
ATOM	1282	OG1	THR	A	226	49.831	23.410	11.113	1.00	22.68	A
ATOM	1283	CG2	THR	A	226	51.571	24.490	9.834	1.00	25.00	A
ATOM	1284	C	THR	A	226	52.046	22.233	12.894	1.00	25.79	A
ATOM	1285	O	THR	A	226	52.019	23.100	13.768	1.00	24.54	A
ATOM	1286	N	ALA	A	227	52.037	20.935	13.173	1.00	24.97	A
ATOM	1287	CA	ALA	A	227	52.004	20.475	14.550	1.00	25.49	A
ATOM	1288	CB	ALA	A	227	51.659	18.993	14.607	1.00	22.85	A
ATOM	1289	C	ALA	A	227	53.384	20.715	15.149	1.00	27.70	A
ATOM	1290	O	ALA	A	227	54.331	21.047	14.435	1.00	26.60	A
ATOM	1291	N	LYS	A	228	53.491	20.558	16.461	1.00	28.53	A
ATOM	1292	CA	LYS	A	228	54.760	20.745	17.149	1.00	32.12	A
ATOM	1293	CB	LYS	A	228	54.699	21.974	18.054	1.00	33.81	A
ATOM	1294	CG	LYS	A	228	56.007	22.294	18.765	1.00	41.23	A
ATOM	1295	CD	LYS	A	228	57.082	22.725	17.768	1.00	47.57	A
ATOM	1296	CE	LYS	A	228	58.401	23.056	18.462	1.00	49.82	A
ATOM	1297	NZ	LYS	A	228	59.459	23.425	17.480	1.00	51.49	A
ATOM	1298	C	LYS	A	228	55.019	19.504	17.985	1.00	33.25	A
ATOM	1299	O	LYS	A	228	54.190	19.129	18.815	1.00	33.70	A
ATOM	1300	N	VAL	A	229	56.159	18.860	17.756	1.00	33.64	A
ATOM	1301	CA	VAL	A	229	56.516	17.661	18.501	1.00	34.66	A
ATOM	1302	CB	VAL	A	229	57.248	16.646	17.609	1.00	33.50	A
ATOM	1303	CG1	VAL	A	229	57.619	15.419	18.415	1.00	32.34	A
ATOM	1304	CG2	VAL	A	229	56.370	16.264	16.436	1.00	34.25	A
ATOM	1305	C	VAL	A	229	57.420	18.035	19.668	1.00	37.57	A
ATOM	1306	O	VAL	A	229	58.581	18.392	19.474	1.00	35.91	A
ATOM	1307	N	LEU	A	230	56.877	17.948	20.878	1.00	40.57	A
ATOM	1308	CA	LEU	A	230	57.615	18.289	22.088	1.00	46.10	A
ATOM	1309	CB	LEU	A	230	56.654	18.417	23.270	1.00	44.71	A
ATOM	1310	CG	LEU	A	230	55.627	19.545	23.207	1.00	44.50	A
ATOM	1311	CD1	LEU	A	230	54.673	19.430	24.383	1.00	44.39	A
ATOM	1312	CD2	LEU	A	230	56.340	20.885	23.214	1.00	44.81	A
ATOM	1313	C	LEU	A	230	58.695	17.279	22.440	1.00	50.42	A
ATOM	1314	O	LEU	A	230	58.603	16.104	22.089	1.00	51.64	A
ATOM	1315	N	SER	A	231	59.717	17.756	23.145	1.00	55.81	A
ATOM	1316	CA	SER	A	231	60.824	16.914	23.583	1.00	61.14	A
ATOM	1317	CB	SER	A	231	62.077	17.200	22.750	1.00	61.27	A
ATOM	1318	OG	SER	A	231	62.444	18.568	22.823	1.00	62.85	A
ATOM	1319	C	SER	A	231	61.124	17.126	25.071	1.00	64.65	A
ATOM	1320	O	SER	A	231	61.392	16.164	25.794	1.00	65.70	A
ATOM	1321	N	PRO	A	232	61.081	18.387	25.549	1.00	67.54	A
ATOM	1322	CD	PRO	A	232	60.854	19.651	24.823	1.00	68.60	A
ATOM	1323	CA	PRO	A	232	61.358	18.655	26.966	1.00	68.74	A
ATOM	1324	CB	PRO	A	232	61.109	20.158	27.086	1.00	68.83	A
ATOM	1325	CG	PRO	A	232	61.505	20.666	25.737	1.00	68.96	A
ATOM	1326	C	PRO	A	232	60.460	17.846	27.899	1.00	69.17	A
ATOM	1327	O	PRO	A	232	59.335	17.494	27.541	1.00	69.94	A
ATOM	1328	N	ALA	A	237	57.424	23.198	27.637	1.00	80.06	A

	ATOM	1329	CA	ALA	A	237	56.783	23.047	26.335	1.00	79.29	A
	ATOM	1330	CB	ALA	A	237	55.275	22.907	26.512	1.00	78.64	A
	ATOM	1331	C	ALA	A	237	57.092	24.239	25.433	1.00	79.07	A
	ATOM	1332	O	ALA	A	237	56.250	25.113	25.249	1.00	79.47	A
5	ATOM	1333	N	ALA	A	238	58.297	24.280	24.871	1.00	78.57	A
	ATOM	1334	CA	ALA	A	238	58.683	25.383	23.992	1.00	78.50	A
	ATOM	1335	CB	ALA	A	238	60.186	25.347	23.728	1.00	78.50	A
	ATOM	1336	C	ALA	A	238	57.920	25.327	22.673	1.00	78.15	A
	ATOM	1337	O	ALA	A	238	57.243	24.341	22.375	1.00	77.96	A
10	ATOM	1338	N	ALA	A	239	58.027	26.393	21.887	1.00	77.28	A
	ATOM	1339	CA	ALA	A	239	57.338	26.452	20.603	1.00	76.27	A
	ATOM	1340	CB	ALA	A	239	55.849	26.489	20.827	1.00	76.61	A
	ATOM	1341	C	ALA	A	239	57.766	27.667	19.793	1.00	75.38	A
	ATOM	1342	O	ALA	A	239	58.955	27.955	19.700	1.00	75.89	A
15	ATOM	1343	N	ASN	A	240	56.781	28.357	19.214	1.00	73.95	A
	ATOM	1344	CA	ASN	A	240	56.967	29.553	18.389	1.00	71.07	A
	ATOM	1345	CB	ASN	A	240	58.151	30.400	18.874	1.00	71.47	A
	ATOM	1346	CG	ASN	A	240	59.459	30.055	18.174	1.00	72.06	A
	ATOM	1347	OD1	ASN	A	240	59.575	30.149	16.943	1.00	72.03	A
20	ATOM	1348	ND2	ASN	A	240	60.470	29.665	18.964	1.00	71.91	A
	ATOM	1349	C	ASN	A	240	57.188	29.178	16.928	1.00	69.41	A
	ATOM	1350	O	ASN	A	240	57.480	28.024	16.624	1.00	70.09	A
	ATOM	1351	N	ALA	A	241	57.055	30.165	16.038	1.00	66.62	A
	ATOM	1352	CA	ALA	A	241	57.246	30.013	14.585	1.00	63.94	A
25	ATOM	1353	C	ALA	A	241	55.952	30.080	13.772	1.00	60.63	A
	ATOM	1354	O	ALA	A	241	55.840	30.880	12.845	1.00	61.29	A
	ATOM	1355	CB	ALA	A	241	57.979	28.704	14.246	1.00	65.23	A
	ATOM	1356	N	PHE	A	242	54.984	29.236	14.113	1.00	56.72	A
	ATOM	1357	CA	PHE	A	242	53.712	29.196	13.394	1.00	52.53	A
30	ATOM	1358	CB	PHE	A	242	53.419	27.767	12.923	1.00	49.14	A
	ATOM	1359	CG	PHE	A	242	52.040	27.590	12.354	1.00	47.38	A
	ATOM	1360	CD1	PHE	A	242	51.731	28.067	11.085	1.00	47.69	A
	ATOM	1361	CD2	PHE	A	242	51.038	26.975	13.102	1.00	45.45	A
	ATOM	1362	CE1	PHE	A	242	50.445	27.937	10.565	1.00	46.75	A
35	ATOM	1363	CE2	PHE	A	242	49.751	26.840	12.594	1.00	45.41	A
	ATOM	1364	CZ	PHE	A	242	49.453	27.323	11.322	1.00	46.55	A
	ATOM	1365	C	PHE	A	242	52.534	29.688	14.229	1.00	50.08	A
	ATOM	1366	O	PHE	A	242	52.502	29.505	15.444	1.00	49.86	A
	ATOM	1367	N	VAL	A	243	51.566	30.305	13.557	1.00	47.67	A
40	ATOM	1368	CA	VAL	A	243	50.355	30.809	14.200	1.00	46.21	A
	ATOM	1369	CB	VAL	A	243	50.340	32.352	14.258	1.00	47.36	A
	ATOM	1370	CG1	VAL	A	243	49.012	32.844	14.825	1.00	47.54	A
	ATOM	1371	CG2	VAL	A	243	51.497	32.842	15.109	1.00	48.50	A
	ATOM	1372	C	VAL	A	243	49.150	30.342	13.389	1.00	44.12	A
45	ATOM	1373	O	VAL	A	243	48.956	30.765	12.247	1.00	44.46	A
	ATOM	1374	N	GLY	A	244	48.348	29.467	13.985	1.00	40.48	A
	ATOM	1375	CA	GLY	A	244	47.176	28.941	13.306	1.00	37.65	A
	ATOM	1376	C	GLY	A	244	46.101	29.960	12.964	1.00	35.39	A
	ATOM	1377	O	GLY	A	244	46.313	31.168	13.065	1.00	35.92	A
50	ATOM	1378	N	THR	A	245	44.936	29.463	12.560	1.00	33.30	A
	ATOM	1379	CA	THR	A	245	43.813	30.312	12.184	1.00	30.20	A
	ATOM	1380	CB	THR	A	245	42.593	29.450	11.829	1.00	32.00	A
	ATOM	1381	OG1	THR	A	245	42.952	28.573	10.755	1.00	32.81	A
	ATOM	1382	CG2	THR	A	245	41.419	30.319	11.390	1.00	28.34	A
55	ATOM	1383	C	THR	A	245	43.476	31.296	13.296	1.00	27.96	A
	ATOM	1384	O	THR	A	245	43.212	30.907	14.434	1.00	25.46	A
	ATOM	1385	N	ALA	A	246	43.486	32.576	12.938	1.00	25.22	A
	ATOM	1386	CA	ALA	A	246	43.247	33.675	13.867	1.00	23.27	A
	ATOM	1387	CB	ALA	A	246	42.956	34.955	13.082	1.00	22.94	A

ATOM	1388	C	ALA	A	246	42.178	33.475	14.934	1.00	21.27	A
ATOM	1389	O	ALA	A	246	42.431	33.705	16.114	1.00	20.93	A
ATOM	1390	N	GLN	A	247	40.988	33.047	14.536	1.00	19.67	A
ATOM	1391	CA	GLN	A	247	39.911	32.886	15.504	1.00	20.17	A
ATOM	1392	CB	GLN	A	247	38.608	32.535	14.779	1.00	21.89	A
ATOM	1393	CG	GLN	A	247	38.522	33.076	13.355	1.00	26.18	A
ATOM	1394	CD	GLN	A	247	37.220	33.794	13.064	1.00	27.30	A
ATOM	1395	OE1	GLN	A	247	36.172	33.447	13.605	1.00	30.13	A
ATOM	1396	NE2	GLN	A	247	37.278	34.792	12.189	1.00	28.70	A
ATOM	1397	C	GLN	A	247	40.181	31.849	16.595	1.00	19.43	A
ATOM	1398	O	GLN	A	247	39.546	31.883	17.648	1.00	18.93	A
ATOM	1399	N	TYR	A	248	41.132	30.948	16.359	1.00	18.60	A
ATOM	1400	CA	TYR	A	248	41.441	29.896	17.329	1.00	19.20	A
ATOM	1401	CB	TYR	A	248	41.333	28.529	16.642	1.00	17.53	A
ATOM	1402	CG	TYR	A	248	40.013	28.362	15.927	1.00	19.32	A
ATOM	1403	CD1	TYR	A	248	38.859	28.010	16.625	1.00	17.69	A
ATOM	1404	CE1	TYR	A	248	37.617	27.976	15.990	1.00	18.18	A
ATOM	1405	CD2	TYR	A	248	39.897	28.664	14.569	1.00	16.87	A
ATOM	1406	CE2	TYR	A	248	38.665	28.635	13.924	1.00	19.17	A
ATOM	1407	CZ	TYR	A	248	37.527	28.295	14.643	1.00	19.46	A
ATOM	1408	OH	TYR	A	248	36.299	28.311	14.023	1.00	18.98	A
ATOM	1409	C	TYR	A	248	42.810	30.039	17.993	1.00	20.42	A
ATOM	1410	O	TYR	A	248	43.208	29.191	18.792	1.00	19.19	A
ATOM	1411	N	VAL	A	249	43.523	31.114	17.673	1.00	20.20	A
ATOM	1412	CA	VAL	A	249	44.841	31.343	18.251	1.00	20.91	A
ATOM	1413	CB	VAL	A	249	45.542	32.532	17.570	1.00	21.18	A
ATOM	1414	CG1	VAL	A	249	46.821	32.896	18.317	1.00	22.45	A
ATOM	1415	CG2	VAL	A	249	45.862	32.170	16.139	1.00	24.01	A
ATOM	1416	C	VAL	A	249	44.764	31.606	19.750	1.00	21.52	A
ATOM	1417	O	VAL	A	249	43.915	32.368	20.216	1.00	22.72	A
ATOM	1418	N	SER	A	250	45.654	30.965	20.503	1.00	20.70	A
ATOM	1419	CA	SER	A	250	45.697	31.133	21.951	1.00	21.65	A
ATOM	1420	CB	SER	A	250	46.370	29.919	22.613	1.00	22.02	A
ATOM	1421	OG	SER	A	250	47.692	29.725	22.132	1.00	22.12	A
ATOM	1422	C	SER	A	250	46.476	32.402	22.280	1.00	22.13	A
ATOM	1423	O	SER	A	250	47.332	32.828	21.511	1.00	22.77	A
ATOM	1424	N	PRO	A	251	46.180	33.029	23.425	1.00	22.23	A
ATOM	1425	CD	PRO	A	251	45.163	32.684	24.433	1.00	22.97	A
ATOM	1426	CA	PRO	A	251	46.893	34.254	23.800	1.00	22.52	A
ATOM	1427	CB	PRO	A	251	46.233	34.650	25.127	1.00	23.06	A
ATOM	1428	CG	PRO	A	251	45.726	33.329	25.676	1.00	22.55	A
ATOM	1429	C	PRO	A	251	48.414	34.115	23.907	1.00	22.15	A
ATOM	1430	O	PRO	A	251	49.143	35.047	23.563	1.00	22.62	A
ATOM	1431	N	GLU	A	252	48.901	32.966	24.367	1.00	20.69	A
ATOM	1432	CA	GLU	A	252	50.347	32.772	24.500	1.00	21.40	A
ATOM	1433	CB	GLU	A	252	50.673	31.382	25.071	1.00	20.59	A
ATOM	1434	CG	GLU	A	252	49.993	30.232	24.352	1.00	21.91	A
ATOM	1435	CD	GLU	A	252	48.691	29.822	25.014	1.00	21.51	A
ATOM	1436	OE1	GLU	A	252	47.989	30.707	25.550	1.00	21.46	A
ATOM	1437	OE2	GLU	A	252	48.367	28.613	24.993	1.00	20.23	A
ATOM	1438	C	GLU	A	252	51.071	32.970	23.167	1.00	22.99	A
ATOM	1439	O	GLU	A	252	52.191	33.480	23.136	1.00	23.17	A
ATOM	1440	N	LEU	A	253	50.441	32.576	22.064	1.00	23.00	A
ATOM	1441	CA	LEU	A	253	51.068	32.753	20.758	1.00	25.62	A
ATOM	1442	CB	LEU	A	253	50.277	32.029	19.669	1.00	26.75	A
ATOM	1443	CG	LEU	A	253	50.743	30.620	19.296	1.00	31.87	A
ATOM	1444	CD1	LEU	A	253	50.433	29.651	20.422	1.00	31.81	A
ATOM	1445	CD2	LEU	A	253	50.044	30.179	18.015	1.00	31.86	A
ATOM	1446	C	LEU	A	253	51.201	34.228	20.371	1.00	26.94	A

ATOM	1447	O	LEU	A	253	52.107	34.601	19.626	1.00	27.09	A
ATOM	1448	N	LEU	A	254	50.297	35.059	20.877	1.00	25.83	A
ATOM	1449	CA	LEU	A	254	50.297	36.485	20.564	1.00	27.26	A
ATOM	1450	CB	LEU	A	254	48.858	37.006	20.564	1.00	25.84	A
ATOM	1451	CG	LEU	A	254	47.882	36.290	19.621	1.00	24.69	A
ATOM	1452	CD1	LEU	A	254	46.459	36.724	19.932	1.00	23.64	A
ATOM	1453	CD2	LEU	A	254	48.236	36.597	18.177	1.00	24.24	A
ATOM	1454	C	LEU	A	254	51.134	37.314	21.537	1.00	30.62	A
ATOM	1455	O	LEU	A	254	51.633	38.383	21.187	1.00	32.35	A
ATOM	1456	N	THR	A	255	51.292	36.821	22.758	1.00	32.47	A
ATOM	1457	CA	THR	A	255	52.056	37.547	23.759	1.00	36.70	A
ATOM	1458	CB	THR	A	255	51.368	37.478	25.127	1.00	34.51	A
ATOM	1459	OG1	THR	A	255	51.188	36.106	25.494	1.00	35.49	A
ATOM	1460	CG2	THR	A	255	50.013	38.166	25.077	1.00	33.40	A
ATOM	1461	C	THR	A	255	53.477	37.035	23.910	1.00	40.09	A
ATOM	1462	O	THR	A	255	54.430	37.793	23.772	1.00	43.69	A
ATOM	1463	N	GLU	A	256	53.617	35.747	24.189	1.00	44.77	A
ATOM	1464	CA	GLU	A	256	54.932	35.144	24.382	1.00	49.15	A
ATOM	1465	CB	GLU	A	256	54.866	34.143	25.534	1.00	51.24	A
ATOM	1466	CG	GLU	A	256	54.514	34.786	26.862	1.00	56.03	A
ATOM	1467	CD	GLU	A	256	54.053	33.780	27.893	1.00	58.83	A
ATOM	1468	OE1	GLU	A	256	54.766	32.776	28.107	1.00	62.13	A
ATOM	1469	OE2	GLU	A	256	52.979	33.996	28.494	1.00	60.34	A
ATOM	1470	C	GLU	A	256	55.475	34.456	23.137	1.00	50.09	A
ATOM	1471	O	GLU	A	256	56.616	33.995	23.127	1.00	50.42	A
ATOM	1472	N	LYS	A	257	54.658	34.389	22.090	1.00	51.21	A
ATOM	1473	CA	LYS	A	257	55.064	33.746	20.845	1.00	51.22	A
ATOM	1474	CB	LYS	A	257	56.244	34.502	20.227	1.00	53.28	A
ATOM	1475	CG	LYS	A	257	56.558	34.125	18.790	1.00	55.19	A
ATOM	1476	CD	LYS	A	257	57.709	34.961	18.253	1.00	57.52	A
ATOM	1477	CE	LYS	A	257	57.952	34.694	16.777	1.00	58.52	A
ATOM	1478	NZ	LYS	A	257	58.290	33.268	16.515	1.00	60.88	A
ATOM	1479	C	LYS	A	257	55.467	32.302	21.138	1.00	50.74	A
ATOM	1480	O	LYS	A	257	56.432	31.790	20.577	1.00	52.26	A
ATOM	1481	N	SER	A	258	54.721	31.654	22.027	1.00	48.07	A
ATOM	1482	CA	SER	A	258	54.999	30.273	22.402	1.00	46.87	A
ATOM	1483	CB	SER	A	258	55.590	30.229	23.812	1.00	48.88	A
ATOM	1484	OG	SER	A	258	54.741	30.892	24.734	1.00	53.14	A
ATOM	1485	C	SER	A	258	53.735	29.415	22.342	1.00	44.07	A
ATOM	1486	O	SER	A	258	52.617	29.932	22.417	1.00	44.17	A
ATOM	1487	N	ALA	A	259	53.917	28.105	22.204	1.00	38.30	A
ATOM	1488	CA	ALA	A	259	52.793	27.180	22.127	1.00	34.73	A
ATOM	1489	CB	ALA	A	259	52.551	26.779	20.684	1.00	34.16	A
ATOM	1490	C	ALA	A	259	53.042	25.940	22.977	1.00	32.34	A
ATOM	1491	O	ALA	A	259	54.172	25.459	23.086	1.00	31.81	A
ATOM	1492	N	CYS	A	260	51.975	25.428	23.579	1.00	28.58	A
ATOM	1493	CA	CYS	A	260	52.056	24.244	24.425	1.00	26.27	A
ATOM	1494	CB	CYS	A	260	52.183	24.654	25.892	1.00	26.53	A
ATOM	1495	SG	CYS	A	260	50.846	25.739	26.469	1.00	32.91	A
ATOM	1496	C	CYS	A	260	50.786	23.435	24.224	1.00	22.83	A
ATOM	1497	O	CYS	A	260	49.892	23.856	23.495	1.00	22.14	A
ATOM	1498	N	LYS	A	261	50.706	22.277	24.868	1.00	20.02	A
ATOM	1499	CA	LYS	A	261	49.526	21.434	24.744	1.00	20.65	A
ATOM	1500	CB	LYS	A	261	49.619	20.243	25.696	1.00	23.28	A
ATOM	1501	CG	LYS	A	261	50.716	19.253	25.347	1.00	27.44	A
ATOM	1502	CD	LYS	A	261	50.732	18.117	26.350	1.00	29.98	A
ATOM	1503	CE	LYS	A	261	51.922	17.203	26.134	1.00	32.34	A
ATOM	1504	NZ	LYS	A	261	51.940	16.121	27.153	1.00	33.28	A
ATOM	1505	C	LYS	A	261	48.268	22.229	25.062	1.00	19.20	A

ATOM	1506	O	LYS	A	261	47.253	22.092	24.387	1.00	18.08	A
ATOM	1507	N	SER	A	262	48.358	23.068	26.089	1.00	16.92	A
ATOM	1508	CA	SER	A	262	47.235	23.883	26.534	1.00	18.13	A
ATOM	1509	CB	SER	A	262	47.644	24.698	27.770	1.00	18.27	A
ATOM	1510	OG	SER	A	262	46.517	25.258	28.421	1.00	22.53	A
ATOM	1511	C	SER	A	262	46.736	24.811	25.424	1.00	16.77	A
ATOM	1512	O	SER	A	262	45.591	25.254	25.450	1.00	15.69	A
ATOM	1513	N	SER	A	263	47.595	25.118	24.456	1.00	16.44	A
ATOM	1514	CA	SER	A	263	47.175	25.970	23.347	1.00	16.89	A
ATOM	1515	CB	SER	A	263	48.340	26.228	22.382	1.00	18.49	A
ATOM	1516	OG	SER	A	263	49.402	26.909	23.031	1.00	22.10	A
ATOM	1517	C	SER	A	263	46.040	25.257	22.612	1.00	17.79	A
ATOM	1518	O	SER	A	263	45.099	25.898	22.148	1.00	17.57	A
ATOM	1519	N	ASP	A	264	46.119	23.928	22.517	1.00	16.30	A
ATOM	1520	CA	ASP	A	264	45.069	23.166	21.836	1.00	16.72	A
ATOM	1521	CB	ASP	A	264	45.483	21.704	21.620	1.00	15.92	A
ATOM	1522	CG	ASP	A	264	46.544	21.539	20.548	1.00	17.93	A
ATOM	1523	OD1	ASP	A	264	46.642	22.412	19.661	1.00	16.78	A
ATOM	1524	OD2	ASP	A	264	47.265	20.515	20.579	1.00	16.64	A
ATOM	1525	C	ASP	A	264	43.773	23.194	22.646	1.00	17.67	A
ATOM	1526	O	ASP	A	264	42.681	23.197	22.076	1.00	18.27	A
ATOM	1527	N	LEU	A	265	43.898	23.205	23.974	1.00	15.49	A
ATOM	1528	CA	LEU	A	265	42.730	23.232	24.849	1.00	14.75	A
ATOM	1529	CB	LEU	A	265	43.147	23.038	26.313	1.00	11.38	A
ATOM	1530	CG	LEU	A	265	43.711	21.641	26.621	1.00	14.04	A
ATOM	1531	CD1	LEU	A	265	44.249	21.579	28.052	1.00	13.96	A
ATOM	1532	CD2	LEU	A	265	42.619	20.603	26.416	1.00	11.62	A
ATOM	1533	C	LEU	A	265	41.999	24.557	24.675	1.00	15.13	A
ATOM	1534	O	LEU	A	265	40.777	24.620	24.785	1.00	16.75	A
ATOM	1535	N	TRP	A	266	42.746	25.622	24.405	1.00	16.08	A
ATOM	1536	CA	TRP	A	266	42.118	26.918	24.184	1.00	16.96	A
ATOM	1537	CB	TRP	A	266	43.176	28.015	24.023	1.00	17.28	A
ATOM	1538	CG	TRP	A	266	42.618	29.326	23.521	1.00	20.54	A
ATOM	1539	CD2	TRP	A	266	42.313	30.490	24.301	1.00	20.07	A
ATOM	1540	CE2	TRP	A	266	41.782	31.459	23.417	1.00	20.46	A
ATOM	1541	CE3	TRP	A	266	42.435	30.810	25.660	1.00	20.68	A
ATOM	1542	CD1	TRP	A	266	42.270	29.631	22.231	1.00	19.53	A
ATOM	1543	NE1	TRP	A	266	41.769	30.908	22.163	1.00	19.61	A
ATOM	1544	CZ2	TRP	A	266	41.372	32.727	23.850	1.00	20.90	A
ATOM	1545	CZ3	TRP	A	266	42.026	32.073	26.091	1.00	19.45	A
ATOM	1546	CH2	TRP	A	266	41.501	33.015	25.185	1.00	20.71	A
ATOM	1547	C	TRP	A	266	41.284	26.795	22.913	1.00	17.22	A
ATOM	1548	O	TRP	A	266	40.139	27.240	22.863	1.00	18.03	A
ATOM	1549	N	ALA	A	267	41.863	26.181	21.886	1.00	17.50	A
ATOM	1550	CA	ALA	A	267	41.155	25.990	20.626	1.00	16.16	A
ATOM	1551	CB	ALA	A	267	42.050	25.290	19.621	1.00	14.28	A
ATOM	1552	C	ALA	A	267	39.901	25.159	20.891	1.00	16.28	A
ATOM	1553	O	ALA	A	267	38.835	25.436	20.346	1.00	16.46	A
ATOM	1554	N	LEU	A	268	40.031	24.144	21.739	1.00	16.57	A
ATOM	1555	CA	LEU	A	268	38.890	23.299	22.084	1.00	17.03	A
ATOM	1556	CB	LEU	A	268	39.292	22.260	23.139	1.00	15.35	A
ATOM	1557	CG	LEU	A	268	38.158	21.429	23.754	1.00	19.00	A
ATOM	1558	CD1	LEU	A	268	37.505	20.578	22.678	1.00	16.17	A
ATOM	1559	CD2	LEU	A	268	38.718	20.537	24.881	1.00	17.49	A
ATOM	1560	C	LEU	A	268	37.766	24.179	22.628	1.00	15.72	A
ATOM	1561	O	LEU	A	268	36.603	24.031	22.247	1.00	15.28	A
ATOM	1562	N	GLY	A	269	38.119	25.099	23.520	1.00	14.34	A
ATOM	1563	CA	GLY	A	269	37.124	25.989	24.092	1.00	13.39	A
ATOM	1564	C	GLY	A	269	36.406	26.808	23.031	1.00	14.94	A

ATOM	1565	O	GLY	A	269	35.193	27.014	23.114	1.00	14.76	A
ATOM	1566	N	CYS	A	270	37.146	27.279	22.030	1.00	13.86	A
ATOM	1567	CA	CYS	A	270	36.539	28.061	20.958	1.00	16.80	A
ATOM	1568	CB	CYS	A	270	37.611	28.634	20.023	1.00	15.97	A
ATOM	1569	SG	CYS	A	270	38.751	29.810	20.780	1.00	20.48	A
ATOM	1570	C	CYS	A	270	35.598	27.175	20.140	1.00	17.50	A
ATOM	1571	O	CYS	A	270	34.516	27.604	19.741	1.00	18.38	A
ATOM	1572	N	ILE	A	271	36.022	25.939	19.887	1.00	16.99	A
ATOM	1573	CA	ILE	A	271	35.221	25.004	19.104	1.00	16.66	A
ATOM	1574	CB	ILE	A	271	36.038	23.741	18.778	1.00	16.53	A
ATOM	1575	CG2	ILE	A	271	35.155	22.694	18.102	1.00	16.34	A
ATOM	1576	CG1	ILE	A	271	37.222	24.129	17.882	1.00	15.59	A
ATOM	1577	CD1	ILE	A	271	38.239	23.018	17.690	1.00	14.88	A
ATOM	1578	G	ILE	A	271	33.920	24.626	19.809	1.00	16.74	A
ATOM	1579	O	ILE	A	271	32.865	24.576	19.179	1.00	17.12	A
ATOM	1580	N	ILE	A	272	33.990	24.357	21.111	1.00	16.13	A
ATOM	1581	CA	ILE	A	272	32.785	24.021	21.862	1.00	18.30	A
ATOM	1582	CB	ILE	A	272	33.097	23.747	23.346	1.00	17.77	A
ATOM	1583	CG2	ILE	A	272	31.796	23.666	24.152	1.00	17.96	A
ATOM	1584	CG1	ILE	A	272	33.877	22.437	23.481	1.00	19.55	A
ATOM	1585	CD1	ILE	A	272	34.446	22.217	24.886	1.00	18.64	A
ATOM	1586	C	ILE	A	272	31.824	25.207	21.776	1.00	19.51	A
ATOM	1587	O	ILE	A	272	30.624	25.037	21.554	1.00	20.44	A
ATOM	1588	N	TYR	A	273	32.362	26.409	21.947	1.00	18.52	A
ATOM	1589	CA	TYR	A	273	31.553	27.615	21.881	1.00	20.48	A
ATOM	1590	CB	TYR	A	273	32.418	28.847	22.162	1.00	18.98	A
ATOM	1591	CG	TYR	A	273	31.663	30.161	22.125	1.00	20.26	A
ATOM	1592	CD1	TYR	A	273	31.229	30.709	20.916	1.00	20.67	A
ATOM	1593	CE1	TYR	A	273	30.536	31.917	20.880	1.00	20.98	A
ATOM	1594	CD2	TYR	A	273	31.383	30.857	23.302	1.00	19.82	A
ATOM	1595	CE2	TYR	A	273	30.691	32.062	23.280	1.00	20.62	A
ATOM	1596	CZ	TYR	A	273	30.271	32.587	22.067	1.00	21.15	A
ATOM	1597	OH	TYR	A	273	29.588	33.776	22.049	1.00	21.86	A
ATOM	1598	C	TYR	A	273	30.902	27.730	20.507	1.00	21.54	A
ATOM	1599	O	TYR	A	273	29.719	28.049	20.401	1.00	22.80	A
ATOM	1600	N	GLN	A	274	31.676	27.454	19.461	1.00	21.05	A
ATOM	1601	CA	GLN	A	274	31.176	27.538	18.095	1.00	21.48	A
ATOM	1602	CB	GLN	A	274	32.323	27.341	17.097	1.00	21.41	A
ATOM	1603	CG	GLN	A	274	31.934	27.596	15.645	1.00	23.15	A
ATOM	1604	CD	GLN	A	274	33.131	27.588	14.706	1.00	24.80	A
ATOM	1605	OE1	GLN	A	274	34.276	27.446	15.139	1.00	22.51	A
ATOM	1606	NE2	GLN	A	274	32.870	27.750	13.413	1.00	22.96	A
ATOM	1607	C	GLN	A	274	30.076	26.517	17.828	1.00	21.51	A
ATOM	1608	O	GLN	A	274	29.123	26.806	17.108	1.00	20.50	A
ATOM	1609	N	LEU	A	275	30.207	25.324	18.403	1.00	21.44	A
ATOM	1610	CA	LEU	A	275	29.196	24.282	18.208	1.00	20.95	A
ATOM	1611	CB	LEU	A	275	29.645	22.958	18.846	1.00	19.11	A
ATOM	1612	CG	LEU	A	275	30.775	22.182	18.159	1.00	21.43	A
ATOM	1613	CD1	LEU	A	275	31.118	20.936	18.963	1.00	17.64	A
ATOM	1614	CD2	LEU	A	275	30.342	21.795	16.754	1.00	20.34	A
ATOM	1615	C	LEU	A	275	27.860	24.697	18.815	1.00	21.32	A
ATOM	1616	O	LEU	A	275	26.802	24.461	18.229	1.00	19.75	A
ATOM	1617	N	VAL	A	276	27.921	25.322	19.987	1.00	19.10	A
ATOM	1618	CA	VAL	A	276	26.724	25.750	20.702	1.00	22.47	A
ATOM	1619	CB	VAL	A	276	27.011	25.882	22.217	1.00	20.87	A
ATOM	1620	CG1	VAL	A	276	25.742	26.291	22.957	1.00	19.68	A
ATOM	1621	CG2	VAL	A	276	27.550	24.558	22.766	1.00	19.43	A
ATOM	1622	C	VAL	A	276	26.127	27.075	20.211	1.00	23.89	A
ATOM	1623	O	VAL	A	276	24.910	27.199	20.070	1.00	24.90	A

ATOM	1624	N	ALA	A	277	26.983	28.062	19.965	1.00 24.56	A
ATOM	1625	CA	ALA	A	277	26.533	29.374	19.518	1.00 24.72	A
ATOM	1626	CB	ALA	A	277	27.504	30.444	19.999	1.00 24.36	A
ATOM	1627	C	ALA	A	277	26.378	29.458	18.005	1.00 25.76	A
ATOM	1628	O	ALA	A	277	25.577	30.242	17.502	1.00 26.39	A
ATOM	1629	N	GLY	A	278	27.142	28.651	17.280	1.00 25.13	A
ATOM	1630	CA	GLY	A	278	27.062	28.673	15.834	1.00 25.58	A
ATOM	1631	C	GLY	A	278	28.163	29.524	15.231	1.00 26.50	A
ATOM	1632	O	GLY	A	278	28.374	29.510	14.015	1.00 28.17	A
ATOM	1633	N	LEU	A	279	28.866	30.262	16.086	1.00 24.44	A
ATOM	1634	CA	LEU	A	279	29.962	31.130	15.656	1.00 25.21	A
ATOM	1635	CB	LEU	A	279	29.468	32.575	15.500	1.00 25.78	A
ATOM	1636	CG	LEU	A	279	28.364	32.899	14.490	1.00 28.17	A
ATOM	1637	CD1	LEU	A	279	27.922	34.344	14.684	1.00 26.60	A
ATOM	1638	CD2	LEU	A	279	28.862	32.670	13.071	1.00 26.52	A
ATOM	1639	C	LEU	A	279	31.093	31.116	16.687	1.00 23.47	A
ATOM	1640	O	LEU	A	279	30.848	30.994	17.882	1.00 24.44	A
ATOM	1641	N	PRO	A	280	32.349	31.239	16.236	1.00 23.35	A
ATOM	1642	CD	PRO	A	280	32.831	31.404	14.855	1.00 22.26	A
ATOM	1643	CA	PRO	A	280	33.464	31.239	17.189	1.00 23.81	A
ATOM	1644	CB	PRO	A	280	34.692	31.293	16.282	1.00 23.24	A
ATOM	1645	CG	PRO	A	280	34.189	32.020	15.073	1.00 24.89	A
ATOM	1646	C	PRO	A	280	33.353	32.444	18.137	1.00 22.69	A
ATOM	1647	O	PRO	A	280	32.750	33.457	17.788	1.00 22.11	A
ATOM	1648	N	PRO	A	281	33.939	32.344	19.345	1.00 23.06	A
ATOM	1649	CD	PRO	A	281	34.810	31.223	19.734	1.00 21.37	A
ATOM	1650	CA	PRO	A	281	33.935	33.375	20.395	1.00 23.67	A
ATOM	1651	CB	PRO	A	281	34.781	32.751	21.509	1.00 24.89	A
ATOM	1652	CG	PRO	A	281	34.749	31.287	21.219	1.00 25.24	A
ATOM	1653	C	PRO	A	281	34.481	34.752	20.017	1.00 23.75	A
ATOM	1654	O	PRO	A	281	33.869	35.781	20.317	1.00 21.02	A
ATOM	1655	N	PHE	A	282	35.644	34.763	19.379	1.00 22.17	A
ATOM	1656	CA	PHE	A	282	36.293	36.007	18.998	1.00 23.16	A
ATOM	1657	CB	PHE	A	282	37.765	35.943	19.406	1.00 21.01	A
ATOM	1658	CG	PHE	A	282	37.975	35.482	20.822	1.00 22.66	A
ATOM	1659	CD1	PHE	A	282	37.806	36.361	21.888	1.00 20.06	A
ATOM	1660	CD2	PHE	A	282	38.291	34.151	21.093	1.00 20.72	A
ATOM	1661	CE1	PHE	A	282	37.947	35.921	23.206	1.00 22.66	A
ATOM	1662	CE2	PHE	A	282	38.433	33.702	22.405	1.00 20.97	A
ATOM	1663	CZ	PHE	A	282	38.261	34.590	23.466	1.00 19.58	A
ATOM	1664	C	PHE	A	282	36.169	36.263	17.503	1.00 24.39	A
ATOM	1665	O	PHE	A	282	36.802	35.585	16.694	1.00 25.80	A
ATOM	1666	N	ARG	A	283	35.355	37.248	17.142	1.00 24.99	A
ATOM	1667	CA	ARG	A	283	35.141	37.594	15.741	1.00 26.33	A
ATOM	1668	CB	ARG	A	283	33.721	37.209	15.316	1.00 28.91	A
ATOM	1669	CG	ARG	A	283	33.293	35.808	15.724	1.00 30.27	A
ATOM	1670	CD	ARG	A	283	31.904	35.493	15.188	1.00 33.36	A
ATOM	1671	NE	ARG	A	283	30.890	36.392	15.733	1.00 32.76	A
ATOM	1672	CZ	ARG	A	283	30.372	36.287	16.952	1.00 34.79	A
ATOM	1673	NH1	ARG	A	283	30.767	35.317	17.768	1.00 35.77	A
ATOM	1674	NH2	ARG	A	283	29.458	37.156	17.359	1.00 36.12	A
ATOM	1675	C	ARG	A	283	35.328	39.096	15.544	1.00 26.47	A
ATOM	1676	O	ARG	A	283	35.029	39.888	16.438	1.00 26.28	A
ATOM	1677	N	ALA	A	284	35.818	39.486	14.373	1.00 26.70	A
ATOM	1678	CA	ALA	A	284	36.033	40.899	14.079	1.00 27.84	A
ATOM	1679	CB	ALA	A	284	37.188	41.442	14.914	1.00 26.24	A
ATOM	1680	C	ALA	A	284	36.327	41.077	12.602	1.00 28.35	A
ATOM	1681	O	ALA	A	284	36.560	40.101	11.891	1.00 29.91	A
ATOM	1682	N	GLY	A	285	36.332	42.329	12.153	1.00 29.29	A

ATOM	1683	CA	GLY	A	285	36.577	42.631	10.753	1.00	29.52	A
ATOM	1684	C	GLY	A	285	37.893	42.156	10.168	1.00	30.12	A
ATOM	1685	O	GLY	A	285	37.974	41.862	8.976	1.00	30.60	A
ATOM	1686	N	ASN	A	286	38.939	42.097	10.983	1.00	28.49	A
ATOM	1687	CA	ASN	A	286	40.231	41.644	10.489	1.00	26.71	A
ATOM	1688	CB	ASN	A	286	41.050	42.825	9.945	1.00	26.11	A
ATOM	1689	CG	ASN	A	286	41.310	43.900	10.990	1.00	27.83	A
ATOM	1690	OD1	ASN	A	286	41.877	43.631	12.049	1.00	27.84	A
ATOM	1691	ND2	ASN	A	286	40.908	45.131	10.685	1.00	25.95	A
ATOM	1692	C	ASN	A	286	40.997	40.924	11.584	1.00	26.03	A
ATOM	1693	O	ASN	A	286	40.540	40.851	12.723	1.00	25.66	A
ATOM	1694	N	GLU	A	287	42.162	40.391	11.239	1.00	24.81	A
ATOM	1695	CA	GLU	A	287	42.965	39.662	12.206	1.00	27.59	A
ATOM	1696	CB	GLU	A	287	44.145	38.985	11.510	1.00	30.17	A
ATOM	1697	CG	GLU	A	287	43.776	37.632	10.931	1.00	38.21	A
ATOM	1698	CD	GLU	A	287	44.900	36.998	10.140	1.00	41.86	A
ATOM	1699	OE1	GLU	A	287	46.061	37.036	10.608	1.00	43.08	A
ATOM	1700	OE2	GLU	A	287	44.612	36.449	9.052	1.00	45.22	A
ATOM	1701	C	GLU	A	287	43.459	40.485	13.383	1.00	25.05	A
ATOM	1702	O	GLU	A	287	43.382	40.030	14.521	1.00	26.41	A
ATOM	1703	N	TYR	A	288	43.966	41.685	13.122	1.00	23.04	A
ATOM	1704	CA	TYR	A	288	44.460	42.528	14.205	1.00	22.34	A
ATOM	1705	CB	TYR	A	288	44.867	43.913	13.691	1.00	21.07	A
ATOM	1706	CG	TYR	A	288	45.275	44.858	14.805	1.00	21.07	A
ATOM	1707	CD1	TYR	A	288	46.533	44.762	15.405	1.00	21.23	A
ATOM	1708	CE1	TYR	A	288	46.891	45.588	16.475	1.00	20.43	A
ATOM	1709	CD2	TYR	A	288	44.380	45.809	15.302	1.00	22.32	A
ATOM	1710	CE2	TYR	A	288	44.725	46.637	16.373	1.00	23.28	A
ATOM	1711	CZ	TYR	A	288	45.981	46.518	16.953	1.00	22.96	A
ATOM	1712	OH	TYR	A	288	46.316	47.313	18.024	1.00	23.18	A
ATOM	1713	C	TYR	A	288	43.402	42.698	15.288	1.00	21.38	A
ATOM	1714	O	TYR	A	288	43.710	42.616	16.473	1.00	22.09	A
ATOM	1715	N	LEU	A	289	42.159	42.939	14.874	1.00	21.88	A
ATOM	1716	CA	LEU	A	289	41.055	43.130	15.811	1.00	21.98	A
ATOM	1717	CB	LEU	A	289	39.821	43.673	15.078	1.00	22.90	A
ATOM	1718	CG	LEU	A	289	39.896	45.130	14.601	1.00	26.52	A
ATOM	1719	CD1	LEU	A	289	38.706	45.436	13.696	1.00	26.55	A
ATOM	1720	CD2	LEU	A	289	39.914	46.071	15.807	1.00	23.13	A
ATOM	1721	C	LEU	A	289	40.686	41.849	16.560	1.00	21.24	A
ATOM	1722	O	LEU	A	289	40.256	41.897	17.715	1.00	20.72	A
ATOM	1723	N	ILE	A	290	40.843	40.708	15.900	1.00	19.62	A
ATOM	1724	CA	ILE	A	290	40.538	39.433	16.533	1.00	18.54	A
ATOM	1725	CB	ILE	A	290	40.560	38.281	15.509	1.00	18.52	A
ATOM	1726	CG2	ILE	A	290	40.503	36.934	16.234	1.00	17.63	A
ATOM	1727	CG1	ILE	A	290	39.378	38.429	14.545	1.00	18.88	A
ATOM	1728	CD1	ILE	A	290	39.421	37.483	13.357	1.00	19.81	A
ATOM	1729	C	ILE	A	290	41.578	39.167	17.618	1.00	19.09	A
ATOM	1730	O	ILE	A	290	41.236	38.788	18.737	1.00	18.20	A
ATOM	1731	N	PHE	A	291	42.849	39.376	17.286	1.00	18.76	A
ATOM	1732	CA	PHE	A	291	43.925	39.156	18.247	1.00	20.75	A
ATOM	1733	CB	PHE	A	291	45.286	39.434	17.606	1.00	20.71	A
ATOM	1734	CG	PHE	A	291	45.644	38.480	16.503	1.00	22.92	A
ATOM	1735	CD1	PHE	A	291	45.065	37.214	16.443	1.00	22.98	A
ATOM	1736	CD2	PHE	A	291	46.588	38.830	15.543	1.00	22.91	A
ATOM	1737	CE1	PHE	A	291	45.423	36.310	15.440	1.00	24.51	A
ATOM	1738	CE2	PHE	A	291	46.954	37.931	14.535	1.00	25.54	A
ATOM	1739	CZ	PHE	A	291	46.370	36.670	14.485	1.00	23.29	A
ATOM	1740	C	PHE	A	291	43.739	40.061	19.451	1.00	21.72	A
ATOM	1741	O	PHE	A	291	43.992	39.671	20.593	1.00	22.32	A

ATOM	1742	N	GLN	A	292	43.284	41.275	19.178	1.00	23.27	A
ATOM	1743	CA	GLN	A	292	43.055	42.264	20.216	1.00	24.01	A
ATOM	1744	CB	GLN	A	292	42.574	43.559	19.562	1.00	25.77	A
ATOM	1745	CG	GLN	A	292	42.577	44.773	20.447	1.00	28.45	A
ATOM	1746	CD	GLN	A	292	42.469	46.057	19.638	1.00	29.83	A
ATOM	1747	OE1	GLN	A	292	41.520	46.244	18.872	1.00	27.16	A
ATOM	1748	NE2	GLN	A	292	43.449	46.944	19.799	1.00	27.61	A
ATOM	1749	C	GLN	A	292	42.018	41.733	21.204	1.00	22.97	A
ATOM	1750	O	GLN	A	292	42.200	41.832	22.415	1.00	21.64	A
ATOM	1751	N	LYS	A	293	40.937	41.154	20.687	1.00	21.82	A
ATOM	1752	CA	LYS	A	293	39.895	40.612	21.558	1.00	22.18	A
ATOM	1753	CB	LYS	A	293	38.664	40.223	20.740	1.00	22.69	A
ATOM	1754	CG	LYS	A	293	37.919	41.407	20.153	1.00	25.78	A
ATOM	1755	CD	LYS	A	293	36.651	40.961	19.429	1.00	27.88	A
ATOM	1756	CE	LYS	A	293	35.857	42.161	18.926	1.00	30.85	A
ATOM	1757	NZ	LYS	A	293	34.612	41.750	18.214	1.00	32.98	A
ATOM	1758	C	LYS	A	293	40.398	39.398	22.343	1.00	21.20	A
ATOM	1759	O	LYS	A	293	40.041	39.204	23.509	1.00	22.01	A
ATOM	1760	N	ILE	A	294	41.226	38.583	21.702	1.00	19.91	A
ATOM	1761	CA	ILE	A	294	41.774	37.394	22.347	1.00	20.28	A
ATOM	1762	CB	ILE	A	294	42.631	36.575	21.349	1.00	18.98	A
ATOM	1763	CG2	ILE	A	294	43.481	35.550	22.098	1.00	17.70	A
ATOM	1764	CG1	ILE	A	294	41.716	35.897	20.318	1.00	17.93	A
ATOM	1765	CD1	ILE	A	294	42.467	35.237	19.178	1.00	16.21	A
ATOM	1766	C	ILE	A	294	42.618	37.727	23.587	1.00	21.94	A
ATOM	1767	O	ILE	A	294	42.366	37.199	24.673	1.00	20.86	A
ATOM	1768	N	ILE	A	295	43.610	38.600	23.439	1.00	21.88	A
ATOM	1769	CA	ILE	A	295	44.461	38.934	24.582	1.00	24.25	A
ATOM	1770	CB	ILE	A	295	45.668	39.805	24.175	1.00	23.93	A
ATOM	1771	CG2	ILE	A	295	46.514	39.066	23.140	1.00	24.61	A
ATOM	1772	CG1	ILE	A	295	45.189	41.151	23.637	1.00	24.58	A
ATOM	1773	CD1	ILE	A	295	46.317	42.149	23.433	1.00	26.69	A
ATOM	1774	C	ILE	A	295	43.720	39.636	25.717	1.00	24.80	A
ATOM	1775	O	ILE	A	295	44.214	39.687	26.842	1.00	24.76	A
ATOM	1776	N	LYS	A	296	42.539	40.173	25.425	1.00	25.33	A
ATOM	1777	CA	LYS	A	296	41.743	40.853	26.444	1.00	26.80	A
ATOM	1778	CB	LYS	A	296	41.178	42.170	25.894	1.00	27.39	A
ATOM	1779	CG	LYS	A	296	42.240	43.141	25.413	1.00	31.79	A
ATOM	1780	CD	LYS	A	296	41.634	44.410	24.826	1.00	35.56	A
ATOM	1781	CE	LYS	A	296	41.009	45.283	25.900	1.00	39.29	A
ATOM	1782	NZ	LYS	A	296	40.564	46.603	25.357	1.00	41.72	A
ATOM	1783	C	LYS	A	296	40.593	39.958	26.893	1.00	25.50	A
ATOM	1784	O	LYS	A	296	39.770	40.361	27.713	1.00	24.02	A
ATOM	1785	N	LEU	A	297	40.550	38.742	26.349	1.00	25.67	A
ATOM	1786	CA	LEU	A	297	39.500	37.777	26.666	1.00	25.16	A
ATOM	1787	CB	LEU	A	297	39.632	37.285	28.111	1.00	24.80	A
ATOM	1788	CG	LEU	A	297	38.766	36.068	28.460	1.00	26.43	A
ATOM	1789	CD1	LEU	A	297	39.238	34.852	27.646	1.00	26.70	A
ATOM	1790	CD2	LEU	A	297	38.856	35.777	29.951	1.00	24.84	A
ATOM	1791	C	LEU	A	297	38.151	38.459	26.467	1.00	25.11	A
ATOM	1792	O	LEU	A	297	37.261	38.378	27.309	1.00	25.28	A
ATOM	1793	N	GLU	A	298	38.007	39.127	25.331	1.00	24.98	A
ATOM	1794	CA	GLU	A	298	36.786	39.847	25.023	1.00	25.31	A
ATOM	1795	CB	GLU	A	298	37.143	41.139	24.291	1.00	27.13	A
ATOM	1796	CG	GLU	A	298	35.991	42.092	24.108	1.00	31.28	A
ATOM	1797	CD	GLU	A	298	36.419	43.362	23.410	1.00	34.40	A
ATOM	1798	OE1	GLU	A	298	37.348	44.027	23.918	1.00	35.90	A
ATOM	1799	OE2	GLU	A	298	35.832	43.693	22.359	1.00	36.16	A
ATOM	1800	C	GLU	A	298	35.766	39.057	24.207	1.00	23.79	A

ATOM	1801	O	GLU	A	298	35.832	39.017	22.979	1.00	24.35	A
ATOM	1802	N	TYR	A	299	34.825	38.427	24.902	1.00	23.45	A
ATOM	1803	CA	TYR	A	299	33.760	37.663	24.265	1.00	23.98	A
ATOM	1804	CB	TYR	A	299	34.264	36.304	23.755	1.00	20.13	A
ATOM	1805	CG	TYR	A	299	34.348	35.233	24.828	1.00	21.17	A
ATOM	1806	CD1	TYR	A	299	35.336	35.279	25.810	1.00	19.32	A
ATOM	1807	CE1	TYR	A	299	35.389	34.332	26.826	1.00	19.30	A
ATOM	1808	CD2	TYR	A	299	33.410	34.201	24.888	1.00	18.96	A
ATOM	1809	CE2	TYR	A	299	33.456	33.243	25.907	1.00	19.41	A
ATOM	1810	CZ	TYR	A	299	34.449	33.321	26.870	1.00	18.79	A
ATOM	1811	OH	TYR	A	299	34.511	32.401	27.881	1.00	18.77	A
ATOM	1812	C	TYR	A	299	32.699	37.437	25.331	1.00	25.20	A
ATOM	1813	O	TYR	A	299	32.942	37.681	26.506	1.00	26.46	A
ATOM	1814	N	ASP	A	300	31.522	36.981	24.927	1.00	26.94	A
ATOM	1815	CA	ASP	A	300	30.467	36.710	25.891	1.00	30.60	A
ATOM	1816	CB	ASP	A	300	29.665	37.981	26.179	1.00	35.86	A
ATOM	1817	CG	ASP	A	300	29.228	38.687	24.923	1.00	42.04	A
ATOM	1818	OD1	ASP	A	300	28.450	38.088	24.149	1.00	45.98	A
ATOM	1819	OD2	ASP	A	300	29.666	39.840	24.707	1.00	45.69	A
ATOM	1820	C	ASP	A	300	29.564	35.608	25.363	1.00	29.26	A
ATOM	1821	O	ASP	A	300	29.590	35.299	24.172	1.00	28.64	A
ATOM	1822	N	PHE	A	301	28.778	35.011	26.253	1.00	28.96	A
ATOM	1823	CA	PHE	A	301	27.884	33.924	25.871	1.00	30.48	A
ATOM	1824	CB	PHE	A	301	27.818	32.854	26.968	1.00	29.17	A
ATOM	1825	CG	PHE	A	301	29.147	32.279	27.356	1.00	29.29	A
ATOM	1826	CD1	PHE	A	301	29.978	32.949	28.245	1.00	27.31	A
ATOM	1827	CD2	PHE	A	301	29.560	31.050	26.845	1.00	27.89	A
ATOM	1828	CE1	PHE	A	301	31.205	32.403	28.625	1.00	28.83	A
ATOM	1829	CE2	PHE	A	301	30.781	30.498	27.217	1.00	28.05	A
ATOM	1830	CZ	PHE	A	301	31.605	31.175	28.110	1.00	28.27	A
ATOM	1831	C	PHE	A	301	26.459	34.384	25.619	1.00	32.20	A
ATOM	1832	O	PHE	A	301	25.946	35.261	26.317	1.00	32.36	A
ATOM	1833	N	PRO	A	302	25.798	33.804	24.607	1.00	33.29	A
ATOM	1834	CD	PRO	A	302	26.313	32.943	23.529	1.00	34.04	A
ATOM	1835	CA	PRO	A	302	24.415	34.199	24.341	1.00	35.24	A
ATOM	1836	CB	PRO	A	302	24.144	33.608	22.959	1.00	34.01	A
ATOM	1837	CG	PRO	A	302	25.041	32.413	22.921	1.00	35.48	A
ATOM	1838	C	PRO	A	302	23.567	33.561	25.444	1.00	37.39	A
ATOM	1839	O	PRO	A	302	23.935	32.518	25.986	1.00	38.49	A
ATOM	1840	N	ALA	A	303	22.447	34.188	25.783	1.00	39.36	A
ATOM	1841	CA	ALA	A	303	21.572	33.692	26.843	1.00	40.65	A
ATOM	1842	CB	ALA	A	303	20.280	34.506	26.862	1.00	41.66	A
ATOM	1843	C	ALA	A	303	21.238	32.197	26.814	1.00	41.25	A
ATOM	1844	O	ALA	A	303	21.253	31.537	27.854	1.00	43.16	A
ATOM	1845	N	ALA	A	304	20.945	31.665	25.631	1.00	41.04	A
ATOM	1846	CA	ALA	A	304	20.569	30.258	25.480	1.00	40.66	A
ATOM	1847	CB	ALA	A	304	20.121	30.004	24.040	1.00	41.36	A
ATOM	1848	C	ALA	A	304	21.628	29.223	25.876	1.00	39.61	A
ATOM	1849	O	ALA	A	304	21.298	28.156	26.395	1.00	40.61	A
ATOM	1850	N	PHE	A	305	22.891	29.543	25.617	1.00	36.21	A
ATOM	1851	CA	PHE	A	305	24.022	28.662	25.909	1.00	32.08	A
ATOM	1852	CB	PHE	A	305	25.259	29.519	26.187	1.00	29.46	A
ATOM	1853	CG	PHE	A	305	26.536	28.917	25.690	1.00	28.15	A
ATOM	1854	CD1	PHE	A	305	27.146	27.875	26.377	1.00	26.20	A
ATOM	1855	CD2	PHE	A	305	27.127	29.386	24.521	1.00	27.05	A
ATOM	1856	CE1	PHE	A	305	28.330	27.308	25.908	1.00	26.92	A
ATOM	1857	CE2	PHE	A	305	28.312	28.826	24.042	1.00	26.62	A
ATOM	1858	CZ	PHE	A	305	28.914	27.786	24.737	1.00	26.61	A
ATOM	1859	C	PHE	A	305	23.811	27.664	27.057	1.00	30.09	A

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ATOM   1860  O   PHE A 305      23.518  28.051  28.187  1.00 31.51      A
ATOM   1861  N   PHE A 306      23.964  26.378  26.758  1.00 27.01      A
ATOM   1862  CA  PHE A 306      23.801  25.334  27.769  1.00 26.30      A
ATOM   1863  CB  PHE A 306      24.157  23.970  27.170  1.00 25.03      A
ATOM   1864  CG  PHE A 306      23.548  23.725  25.815  1.00 27.24      A
ATOM   1865  CD1 PHE A 306      22.170  23.831  25.622  1.00 28.40      A
ATOM   1866  CD2 PHE A 306      24.350  23.386  24.728  1.00 27.84      A
ATOM   1867  CE1 PHE A 306      21.601  23.603  24.365  1.00 28.05      A
ATOM   1868  CE2 PHE A 306      23.792  23.155  23.465  1.00 28.31      A
ATOM   1869  CZ  PHE A 306      22.415  23.263  23.283  1.00 28.00      A
ATOM   1870  C   PHE A 306      24.711  25.652  28.961  1.00 26.23      A
ATOM   1871  O   PHE A 306      25.927  25.775  28.811  1.00 25.59      A
ATOM   1872  N   PRO A 307      24.125  25.796  30.163  1.00 26.67      A
ATOM   1873  CD  PRO A 307      22.685  25.625  30.430  1.00 27.95      A
ATOM   1874  CA  PRO A 307      24.842  26.110  31.405  1.00 26.59      A
ATOM   1875  CB  PRO A 307      23.795  25.832  32.481  1.00 26.14      A
ATOM   1876  CG  PRO A 307      22.531  26.250  31.803  1.00 27.86      A
ATOM   1877  C   PRO A 307      26.145  25.355  31.659  1.00 25.58      A
ATOM   1878  O   PRO A 307      27.189  25.964  31.900  1.00 22.65      A
ATOM   1879  N   LYS A 308      26.085  24.031  31.620  1.00 24.46      A
ATOM   1880  CA  LYS A 308      27.274  23.232  31.867  1.00 23.91      A
ATOM   1881  CB  LYS A 308      26.887  21.760  32.024  1.00 23.25      A
ATOM   1882  CG  LYS A 308      26.062  21.532  33.285  1.00 28.49      A
ATOM   1883  CD  LYS A 308      25.618  20.093  33.466  1.00 30.17      A
ATOM   1884  CE  LYS A 308      24.760  19.973  34.722  1.00 33.12      A
ATOM   1885  NZ  LYS A 308      24.122  18.636  34.860  1.00 34.13      A
ATOM   1886  C   LYS A 308      28.314  23.426  30.769  1.00 22.84      A
ATOM   1887  O   LYS A 308      29.514  23.411  31.042  1.00 22.46      A
ATOM   1888  N   ALA A 309      27.861  23.621  29.534  1.00 21.59      A
ATOM   1889  CA  ALA A 309      28.792  23.848  28.432  1.00 20.02      A
ATOM   1890  CB  ALA A 309      28.056  23.856  27.106  1.00 18.80      A
ATOM   1891  C   ALA A 309      29.481  25.191  28.662  1.00 21.41      A
ATOM   1892  O   ALA A 309      30.680  25.335  28.427  1.00 21.39      A
ATOM   1893  N   ARG A 310      28.717  26.179  29.121  1.00 21.39      A
ATOM   1894  CA  ARG A 310      29.290  27.494  29.388  1.00 22.02      A
ATOM   1895  CB  ARG A 310      28.213  28.479  29.854  1.00 22.39      A
ATOM   1896  CG  ARG A 310      28.806  29.756  30.436  1.00 25.30      A
ATOM   1897  CD  ARG A 310      27.780  30.852  30.664  1.00 28.33      A
ATOM   1898  NE  ARG A 310      28.420  32.039  31.230  1.00 30.18      A
ATOM   1899  CZ  ARG A 310      27.901  33.263  31.203  1.00 32.07      A
ATOM   1900  NH1 ARG A 310      26.719  33.477  30.634  1.00 31.19      A
ATOM   1901  NH2 ARG A 310      28.567  34.277  31.742  1.00 30.49      A
ATOM   1902  C   ARG A 310      30.376  27.388  30.458  1.00 21.65      A
ATOM   1903  O   ARG A 310      31.464  27.949  30.311  1.00 20.36      A
ATOM   1904  N   ASP A 311      30.074  26.677  31.541  1.00 19.57      A
ATOM   1905  CA  ASP A 311      31.043  26.512  32.615  1.00 20.18      A
ATOM   1906  CB  ASP A 311      30.460  25.649  33.739  1.00 20.39      A
ATOM   1907  CG  ASP A 311      31.439  25.446  34.881  1.00 23.35      A
ATOM   1908  OD1 ASP A 311      32.158  24.428  34.885  1.00 24.91      A
ATOM   1909  OD2 ASP A 311      31.500  26.312  35.776  1.00 26.96      A
ATOM   1910  C   ASP A 311      32.322  25.877  32.073  1.00 19.73      A
ATOM   1911  O   ASP A 311      33.422  26.289  32.439  1.00 19.30      A
ATOM   1912  N   LEU A 312      32.179  24.891  31.188  1.00 16.32      A
ATOM   1913  CA  LEU A 312      33.349  24.226  30.611  1.00 16.66      A
ATOM   1914  CB  LEU A 312      32.927  23.035  29.744  1.00 16.12      A
ATOM   1915  CG  LEU A 312      34.050  22.320  28.974  1.00 14.73      A
ATOM   1916  CD1 LEU A 312      35.192  21.935  29.912  1.00 14.56      A
ATOM   1917  CD2 LEU A 312      33.477  21.084  28.289  1.00 14.22      A
ATOM   1918  C   LEU A 312      34.181  25.189  29.774  1.00 16.61      A
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ATOM   1919  O   LEU A 312      35.402  25.241  29.910  1.00 16.20      A
ATOM   1920  N   VAL A 313      33.515  25.949  28.908  1.00 16.20      A
ATOM   1921  CA  VAL A 313      34.207  26.907  28.058  1.00 15.37      A
ATOM   1922  CB  VAL A 313      33.216  27.648  27.130  1.00 16.42      A
ATOM   1923  CG1 VAL A 313      33.915  28.796  26.426  1.00 16.93      A
ATOM   1924  CG2 VAL A 313      32.644  26.672  26.103  1.00 17.88      A
ATOM   1925  C   VAL A 313      34.960  27.923  28.911  1.00 17.39      A
ATOM   1926  O   VAL A 313      36.093  28.294  28.591  1.00 18.00      A
ATOM   1927  N   GLU A 314      34.342  28.364  30.004  1.00 17.61      A
ATOM   1928  CA  GLU A 314      34.986  29.331  30.885  1.00 20.43      A
ATOM   1929  CB  GLU A 314      34.009  29.816  31.959  1.00 22.14      A
ATOM   1930  CG  GLU A 314      32.800  30.550  31.396  1.00 26.52      A
ATOM   1931  CD  GLU A 314      31.852  31.025  32.478  1.00 31.26      A
ATOM   1932  OE1 GLU A 314      31.580  30.246  33.417  1.00 33.48      A
ATOM   1933  OE2 GLU A 314      31.370  32.173  32.387  1.00 34.81      A
ATOM   1934  C   GLU A 314      36.217  28.721  31.539  1.00 19.15      A
ATOM   1935  O   GLU A 314      37.134  29.433  31.934  1.00 21.47      A
ATOM   1936  N   LYS A 315      36.245  27.400  31.651  1.00 19.51      A
ATOM   1937  CA  LYS A 315      37.394  26.749  32.258  1.00 19.17      A
ATOM   1938  CB  LYS A 315      36.946  25.514  33.043  1.00 18.84      A
ATOM   1939  CG  LYS A 315      36.280  25.885  34.368  1.00 19.62      A
ATOM   1940  CD  LYS A 315      35.653  24.696  35.073  1.00 19.22      A
ATOM   1941  CE  LYS A 315      35.070  25.095  36.427  1.00 21.00      A
ATOM   1942  NZ  LYS A 315      36.119  25.552  37.381  1.00 19.53      A
ATOM   1943  C   LYS A 315      38.452  26.393  31.218  1.00 18.96      A
ATOM   1944  O   LYS A 315      39.511  25.873  31.561  1.00 19.85      A
ATOM   1945  N   LEU A 316      38.164  26.691  29.950  1.00 17.08      A
ATOM   1946  CA  LEU A 316      39.102  26.429  28.854  1.00 16.41      A
ATOM   1947  CB  LEU A 316      38.414  25.636  27.738  1.00 13.81      A
ATOM   1948  CG  LEU A 316      38.028  24.201  28.115  1.00 14.39      A
ATOM   1949  CD1 LEU A 316      37.139  23.597  27.031  1.00 12.38      A
ATOM   1950  CD2 LEU A 316      39.302  23.373  28.309  1.00 12.77      A
ATOM   1951  C   LEU A 316      39.652  27.743  28.290  1.00 17.12      A
ATOM   1952  O   LEU A 316      40.851  27.860  28.023  1.00 16.53      A
ATOM   1953  N   LEU A 317      38.780  28.729  28.105  1.00 16.27      A
ATOM   1954  CA  LEU A 317      39.228  30.022  27.596  1.00 17.52      A
ATOM   1955  CB  LEU A 317      38.083  30.752  26.887  1.00 16.37      A
ATOM   1956  CG  LEU A 317      37.448  29.973  25.727  1.00 18.81      A
ATOM   1957  CD1 LEU A 317      36.415  30.851  25.018  1.00 16.47      A
ATOM   1958  CD2 LEU A 317      38.528  29.526  24.741  1.00 17.87      A
ATOM   1959  C   LEU A 317      39.745  30.841  28.774  1.00 18.27      A
ATOM   1960  O   LEU A 317      39.078  31.753  29.273  1.00 18.58      A
ATOM   1961  N   VAL A 318      40.937  30.475  29.229  1.00 18.02      A
ATOM   1962  CA  VAL A 318      41.593  31.141  30.342  1.00 18.85      A
ATOM   1963  CB  VAL A 318      41.846  30.153  31.500  1.00 19.91      A
ATOM   1964  CG1 VAL A 318      42.590  30.848  32.634  1.00 20.01      A
ATOM   1965  CG2 VAL A 318      40.520  29.584  31.990  1.00 19.44      A
ATOM   1966  C   VAL A 318      42.923  31.657  29.811  1.00 19.67      A
ATOM   1967  O   VAL A 318      43.690  30.902  29.208  1.00 18.26      A
ATOM   1968  N   LEU A 319      43.197  32.939  30.028  1.00 20.07      A
ATOM   1969  CA  LEU A 319      44.436  33.533  29.538  1.00 20.98      A
ATOM   1970  CB  LEU A 319      44.521  35.002  29.968  1.00 21.64      A
ATOM   1971  CG  LEU A 319      43.418  35.908  29.408  1.00 24.38      A
ATOM   1972  CD1 LEU A 319      43.606  37.332  29.935  1.00 23.28      A
ATOM   1973  CD2 LEU A 319      43.453  35.887  27.875  1.00 24.33      A
ATOM   1974  C   LEU A 319      45.680  32.774  29.994  1.00 20.38      A
ATOM   1975  O   LEU A 319      46.568  32.496  29.192  1.00 21.34      A
ATOM   1976  N   ASP A 320      45.742  32.440  31.280  1.00 20.22      A
ATOM   1977  CA  ASP A 320      46.879  31.707  31.833  1.00 20.90      A
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	ATOM	1978	CB	ASP	A	320	46.842	31.760	33.365	1.00	20.76	A
	ATOM	1979	CG	ASP	A	320	48.049	31.102	34.004	1.00	21.51	A
	ATOM	1980	OD1	ASP	A	320	48.669	30.226	33.367	1.00	23.46	A
	ATOM	1981	OD2	ASP	A	320	48.371	31.450	35.159	1.00	23.89	A
5	ATOM	1982	C	ASP	A	320	46.814	30.247	31.367	1.00	20.06	A
	ATOM	1983	O	ASP	A	320	45.988	29.476	31.840	1.00	20.54	A
	ATOM	1984	N	ALA	A	321	47.700	29.876	30.451	1.00	20.68	A
	ATOM	1985	CA	ALA	A	321	47.733	28.522	29.903	1.00	22.04	A
	ATOM	1986	CB	ALA	A	321	48.860	28.411	28.881	1.00	20.75	A
10	ATOM	1987	C	ALA	A	321	47.858	27.400	30.940	1.00	21.62	A
	ATOM	1988	O	ALA	A	321	47.482	26.259	30.665	1.00	21.99	A
	ATOM	1989	N	THR	A	322	48.372	27.715	32.127	1.00	20.89	A
	ATOM	1990	CA	THR	A	322	48.531	26.698	33.167	1.00	20.82	A
	ATOM	1991	CB	THR	A	322	49.670	27.051	34.146	1.00	19.47	A
15	ATOM	1992	OG1	THR	A	322	49.341	28.253	34.848	1.00	20.19	A
	ATOM	1993	CG2	THR	A	322	50.981	27.249	33.394	1.00	21.59	A
	ATOM	1994	C	THR	A	322	47.264	26.498	33.983	1.00	19.55	A
	ATOM	1995	O	THR	A	322	47.235	25.673	34.894	1.00	21.13	A
	ATOM	1996	N	LYS	A	323	46.216	27.248	33.661	1.00	19.33	A
20	ATOM	1997	CA	LYS	A	323	44.962	27.122	34.392	1.00	21.20	A
	ATOM	1998	CB	LYS	A	323	44.580	28.460	35.030	1.00	23.75	A
	ATOM	1999	CG	LYS	A	323	45.562	28.933	36.084	1.00	28.45	A
	ATOM	2000	CD	LYS	A	323	45.055	30.177	36.799	1.00	33.76	A
	ATOM	2001	CE	LYS	A	323	46.087	30.678	37.802	1.00	36.15	A
25	ATOM	2002	NZ	LYS	A	323	46.532	29.569	38.693	1.00	37.34	A
	ATOM	2003	C	LYS	A	323	43.806	26.614	33.539	1.00	20.68	A
	ATOM	2004	O	LYS	A	323	42.649	26.757	33.915	1.00	20.42	A
	ATOM	2005	N	ARG	A	324	44.114	26.019	32.392	1.00	19.97	A
	ATOM	2006	CA	ARG	A	324	43.060	25.494	31.531	1.00	17.98	A
30	ATOM	2007	CB	ARG	A	324	43.461	25.609	30.061	1.00	15.95	A
	ATOM	2008	CG	ARG	A	324	43.534	27.050	29.603	1.00	17.34	A
	ATOM	2009	CD	ARG	A	324	43.996	27.194	28.172	1.00	19.80	A
	ATOM	2010	NE	ARG	A	324	44.438	28.565	27.944	1.00	16.93	A
	ATOM	2011	CZ	ARG	A	324	45.410	28.908	27.108	1.00	19.88	A
35	ATOM	2012	NH1	ARG	A	324	46.045	27.978	26.398	1.00	14.58	A
	ATOM	2013	NH2	ARG	A	324	45.774	30.181	27.015	1.00	16.51	A
	ATOM	2014	C	ARG	A	324	42.762	24.046	31.883	1.00	18.32	A
	ATOM	2015	O	ARG	A	324	43.673	23.222	32.006	1.00	18.20	A
	ATOM	2016	N	LEU	A	325	41.479	23.748	32.055	1.00	18.32	A
40	ATOM	2017	CA	LEU	A	325	41.050	22.403	32.395	1.00	17.79	A
	ATOM	2018	CB	LEU	A	325	39.523	22.335	32.425	1.00	17.03	A
	ATOM	2019	CG	LEU	A	325	38.896	21.125	33.116	1.00	15.91	A
	ATOM	2020	CD1	LEU	A	325	39.392	21.048	34.557	1.00	15.93	A
	ATOM	2021	CD2	LEU	A	325	37.375	21.255	33.084	1.00	16.56	A
45	ATOM	2022	C	LEU	A	325	41.599	21.433	31.356	1.00	18.68	A
	ATOM	2023	O	LEU	A	325	41.347	21.586	30.157	1.00	18.28	A
	ATOM	2024	N	GLY	A	326	42.354	20.439	31.821	1.00	18.18	A
	ATOM	2025	CA	GLY	A	326	42.931	19.462	30.915	1.00	16.36	A
	ATOM	2026	C	GLY	A	326	44.443	19.558	30.807	1.00	19.15	A
50	ATOM	2027	O	GLY	A	326	45.093	18.592	30.404	1.00	19.52	A
	ATOM	2028	N	CYS	A	327	45.016	20.708	31.161	1.00	18.16	A
	ATOM	2029	CA	CYS	A	327	46.463	20.867	31.075	1.00	19.30	A
	ATOM	2030	CB	CYS	A	327	46.856	22.350	31.058	1.00	20.22	A
	ATOM	2031	SG	CYS	A	327	46.782	23.200	32.649	1.00	21.97	A
55	ATOM	2032	C	CYS	A	327	47.169	20.157	32.228	1.00	20.22	A
	ATOM	2033	O	CYS	A	327	46.561	19.828	33.246	1.00	17.92	A
	ATOM	2034	N	GLU	A	328	48.463	19.933	32.053	1.00	20.51	A
	ATOM	2035	CA	GLU	A	328	49.274	19.244	33.042	1.00	23.34	A
	ATOM	2036	CB	GLU	A	328	50.710	19.139	32.507	1.00	28.68	A

	ATOM	2037	CG	GLU	A	328	50.754	18.367	31.175	1.00	38.24	A
	ATOM	2038	CD	GLU	A	328	52.067	18.500	30.414	1.00	43.23	A
	ATOM	2039	OE1	GLU	A	328	52.535	19.643	30.218	1.00	46.22	A
	ATOM	2040	OE2	GLU	A	328	52.618	17.459	29.991	1.00	44.90	A
	ATOM	2041	C	GLU	A	328	49.234	19.876	34.435	1.00	22.11	A
	ATOM	2042	O	GLU	A	328	49.147	19.161	35.437	1.00	20.27	A
	ATOM	2043	N	GLU	A	329	49.276	21.204	34.506	1.00	18.40	A
	ATOM	2044	CA	GLU	A	329	49.248	21.875	35.801	1.00	20.13	A
	ATOM	2045	CB	GLU	A	329	49.587	23.363	35.657	1.00	20.36	A
	ATOM	2046	CG	GLU	A	329	51.014	23.651	35.190	1.00	24.05	A
	ATOM	2047	CD	GLU	A	329	51.191	23.518	33.688	1.00	25.93	A
	ATOM	2048	OE1	GLU	A	329	50.213	23.154	32.995	1.00	26.61	A
	ATOM	2049	OE2	GLU	A	329	52.311	23.781	33.198	1.00	27.19	A
	ATOM	2050	C	GLU	A	329	47.890	21.718	36.480	1.00	19.36	A
	ATOM	2051	O	GLU	A	329	47.775	21.879	37.694	1.00	18.74	A
	ATOM	2052	N	MET	A	330	46.863	21.415	35.691	1.00	17.28	A
	ATOM	2053	CA	MET	A	330	45.520	21.220	36.229	1.00	16.38	A
	ATOM	2054	CB	MET	A	330	44.474	21.833	35.294	1.00	17.65	A
	ATOM	2055	CG	MET	A	330	44.460	23.365	35.311	1.00	22.95	A
	ATOM	2056	SD	MET	A	330	44.186	24.026	36.979	1.00	26.78	A
	ATOM	2057	CE	MET	A	330	42.435	23.712	37.186	1.00	24.69	A
	ATOM	2058	C	MET	A	330	45.257	19.730	36.422	1.00	14.30	A
	ATOM	2059	O	MET	A	330	44.127	19.304	36.629	1.00	15.39	A
	ATOM	2060	N	GLU	A	331	46.327	18.949	36.346	1.00	15.60	A
	ATOM	2061	CA	GLU	A	331	46.289	17.501	36.531	1.00	17.08	A
	ATOM	2062	CB	GLU	A	331	45.607	17.155	37.862	1.00	17.00	A
	ATOM	2063	CG	GLU	A	331	46.070	18.027	39.038	1.00	17.46	A
	ATOM	2064	CD	GLU	A	331	47.591	18.179	39.145	1.00	20.16	A
	ATOM	2065	OE1	GLU	A	331	48.034	19.073	39.896	1.00	21.39	A
	ATOM	2066	OE2	GLU	A	331	48.345	17.420	38.500	1.00	18.87	A
	ATOM	2067	C	GLU	A	331	45.697	16.658	35.398	1.00	17.80	A
	ATOM	2068	O	GLU	A	331	45.107	15.602	35.636	1.00	20.40	A
	ATOM	2069	N	GLY	A	332	45.844	17.133	34.167	1.00	16.23	A
	ATOM	2070	CA	GLY	A	332	45.420	16.353	33.015	1.00	14.10	A
	ATOM	2071	C	GLY	A	332	43.982	16.154	32.596	1.00	13.54	A
	ATOM	2072	O	GLY	A	332	43.063	16.864	33.017	1.00	11.96	A
	ATOM	2073	N	TYR	A	333	43.804	15.141	31.750	1.00	14.37	A
	ATOM	2074	CA	TYR	A	333	42.510	14.806	31.182	1.00	13.56	A
	ATOM	2075	CB	TYR	A	333	42.722	13.892	29.968	1.00	15.00	A
	ATOM	2076	CG	TYR	A	333	43.153	14.683	28.752	1.00	16.46	A
	ATOM	2077	CD1	TYR	A	333	42.206	15.172	27.849	1.00	15.29	A
	ATOM	2078	CE1	TYR	A	333	42.573	16.002	26.794	1.00	13.42	A
	ATOM	2079	CD2	TYR	A	333	44.490	15.039	28.561	1.00	14.91	A
	ATOM	2080	CE2	TYR	A	333	44.872	15.877	27.499	1.00	14.87	A
	ATOM	2081	CZ	TYR	A	333	43.902	16.353	26.626	1.00	15.61	A
	ATOM	2082	OH	TYR	A	333	44.244	17.197	25.599	1.00	17.29	A
	ATOM	2083	C	TYR	A	333	41.470	14.230	32.127	1.00	15.23	A
	ATOM	2084	O	TYR	A	333	40.278	14.323	31.846	1.00	16.63	A
	ATOM	2085	N	GLY	A	334	41.907	13.650	33.244	1.00	15.50	A
	ATOM	2086	CA	GLY	A	334	40.957	13.100	34.202	1.00	15.07	A
	ATOM	2087	C	GLY	A	334	39.925	14.146	34.616	1.00	16.40	A
	ATOM	2088	O	GLY	A	334	38.724	13.946	34.433	1.00	15.05	A
	ATOM	2089	N	PRO	A	335	40.366	15.278	35.184	1.00	14.96	A
	ATOM	2090	CD	PRO	A	335	41.727	15.531	35.689	1.00	15.88	A
	ATOM	2091	CA	PRO	A	335	39.444	16.339	35.606	1.00	15.29	A
	ATOM	2092	CB	PRO	A	335	40.383	17.397	36.178	1.00	13.19	A
	ATOM	2093	CG	PRO	A	335	41.485	16.569	36.758	1.00	13.81	A
	ATOM	2094	C	PRO	A	335	38.594	16.877	34.448	1.00	15.84	A
	ATOM	2095	O	PRO	A	335	37.423	17.204	34.631	1.00	14.84	A

	ATOM	2096	N	LEU	A	336	39.184	16.971	33.257	1.00	16.12	A
	ATOM	2097	CA	LEU	A	336	38.450	17.465	32.094	1.00	15.52	A
	ATOM	2098	CB	LEU	A	336	39.396	17.653	30.898	1.00	14.39	A
	ATOM	2099	CG	LEU	A	336	38.770	17.991	29.538	1.00	15.46	A
5	ATOM	2100	CD1	LEU	A	336	37.836	19.182	29.662	1.00	11.25	A
	ATOM	2101	CD2	LEU	A	336	39.884	18.285	28.528	1.00	14.11	A
	ATOM	2102	C	LEU	A	336	37.321	16.508	31.714	1.00	16.28	A
	ATOM	2103	O	LEU	A	336	36.176	16.921	31.540	1.00	15.51	A
	ATOM	2104	N	LYS	A	337	37.640	15.225	31.592	1.00	17.22	A
10	ATOM	2105	CA	LYS	A	337	36.624	14.243	31.235	1.00	17.39	A
	ATOM	2106	CB	LYS	A	337	37.293	12.900	30.921	1.00	17.68	A
	ATOM	2107	CG	LYS	A	337	38.170	12.994	29.676	1.00	22.31	A
	ATOM	2108	CD	LYS	A	337	39.213	11.892	29.592	1.00	24.60	A
	ATOM	2109	CE	LYS	A	337	38.620	10.560	29.189	1.00	24.76	A
15	ATOM	2110	NZ	LYS	A	337	39.710	9.560	28.997	1.00	25.05	A
	ATOM	2111	C	LYS	A	337	35.577	14.096	32.342	1.00	17.33	A
	ATOM	2112	O	LYS	A	337	34.456	13.652	32.090	1.00	14.42	A
	ATOM	2113	N	ALA	A	338	35.928	14.500	33.559	1.00	15.83	A
	ATOM	2114	CA	ALA	A	338	34.989	14.395	34.674	1.00	17.52	A
20	ATOM	2115	CB	ALA	A	338	35.749	14.167	35.980	1.00	19.68	A
	ATOM	2116	C	ALA	A	338	34.095	15.621	34.804	1.00	18.83	A
	ATOM	2117	O	ALA	A	338	33.252	15.687	35.695	1.00	18.94	A
	ATOM	2118	N	HIS	A	339	34.262	16.596	33.918	1.00	19.42	A
	ATOM	2119	CA	HIS	A	339	33.438	17.796	34.004	1.00	19.28	A
25	ATOM	2120	CB	HIS	A	339	33.865	18.819	32.949	1.00	19.20	A
	ATOM	2121	CG	HIS	A	339	33.163	20.134	33.074	1.00	20.26	A
	ATOM	2122	CD2	HIS	A	339	33.549	21.299	33.649	1.00	18.95	A
	ATOM	2123	ND1	HIS	A	339	31.880	20.340	32.612	1.00	19.10	A
	ATOM	2124	CE1	HIS	A	339	31.506	21.576	32.896	1.00	22.19	A
30	ATOM	2125	NE2	HIS	A	339	32.500	22.179	33.525	1.00	21.98	A
	ATOM	2126	C	HIS	A	339	31.957	17.448	33.845	1.00	19.13	A
	ATOM	2127	O	HIS	A	339	31.597	16.576	33.061	1.00	19.52	A
	ATOM	2128	N	PRO	A	340	31.079	18.125	34.606	1.00	19.80	A
	ATOM	2129	CD	PRO	A	340	31.424	19.119	35.640	1.00	19.08	A
35	ATOM	2130	CA	PRO	A	340	29.630	17.900	34.569	1.00	20.52	A
	ATOM	2131	CB	PRO	A	340	29.091	19.058	35.396	1.00	20.74	A
	ATOM	2132	CG	PRO	A	340	30.146	19.207	36.454	1.00	19.20	A
	ATOM	2133	C	PRO	A	340	29.000	17.834	33.176	1.00	21.42	A
	ATOM	2134	O	PRO	A	340	28.049	17.088	32.955	1.00	22.48	A
40	ATOM	2135	N	PHE	A	341	29.528	18.606	32.237	1.00	21.33	A
	ATOM	2136	CA	PHE	A	341	28.985	18.610	30.886	1.00	21.57	A
	ATOM	2137	CB	PHE	A	341	29.739	19.624	30.017	1.00	21.64	A
	ATOM	2138	CG	PHE	A	341	29.207	19.740	28.613	1.00	23.18	A
	ATOM	2139	CD1	PHE	A	341	27.903	20.171	28.382	1.00	22.58	A
45	ATOM	2140	CD2	PHE	A	341	30.013	19.431	27.522	1.00	21.95	A
	ATOM	2141	CE1	PHE	A	341	27.410	20.292	27.082	1.00	23.54	A
	ATOM	2142	CE2	PHE	A	341	29.533	19.548	26.220	1.00	21.83	A
	ATOM	2143	CZ	PHE	A	341	28.228	19.980	25.998	1.00	23.23	A
	ATOM	2144	C	PHE	A	341	29.055	17.226	30.237	1.00	21.84	A
50	ATOM	2145	O	PHE	A	341	28.232	16.896	29.389	1.00	20.37	A
	ATOM	2146	N	PHE	A	342	30.034	16.422	30.640	1.00	20.51	A
	ATOM	2147	CA	PHE	A	342	30.221	15.085	30.077	1.00	23.01	A
	ATOM	2148	CB	PHE	A	342	31.710	14.809	29.850	1.00	18.00	A
	ATOM	2149	CG	PHE	A	342	32.398	15.812	28.971	1.00	17.05	A
55	ATOM	2150	CD1	PHE	A	342	32.010	15.987	27.652	1.00	17.78	A
	ATOM	2151	CD2	PHE	A	342	33.487	16.534	29.450	1.00	15.72	A
	ATOM	2152	CE1	PHE	A	342	32.702	16.867	26.811	1.00	18.08	A
	ATOM	2153	CE2	PHE	A	342	34.184	17.414	28.617	1.00	17.45	A
	ATOM	2154	CZ	PHE	A	342	33.790	17.578	27.298	1.00	16.56	A

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ATOM   2155  C   PHE A 342      29.679  13.972  30.976  1.00 24.95      A
ATOM   2156  O   PHE A 342      30.002  12.798  30.777  1.00 23.95      A
ATOM   2157  N   GLU A 343      28.861  14.333  31.958  1.00 27.35      A
ATOM   2158  CA  GLU A 343      28.325  13.349  32.897  1.00 30.28      A
ATOM   2159  CB  GLU A 343      27.187  13.964  33.716  1.00 32.20      A
ATOM   2160  CG  GLU A 343      26.581  12.991  34.714  1.00 39.71      A
ATOM   2161  CD  GLU A 343      25.628  13.661  35.688  1.00 44.72      A
ATOM   2162  OE1 GLU A 343      24.661  14.314  35.234  1.00 47.55      A
ATOM   2163  OE2 GLU A 343      25.847  13.526  36.911  1.00 46.89      A
ATOM   2164  C   GLU A 343      27.852  12.017  32.305  1.00 28.98      A
ATOM   2165  O   GLU A 343      28.225  10.952  32.800  1.00 31.73      A
ATOM   2166  N   SER A 344      27.037  12.067  31.258  1.00 26.09      A
ATOM   2167  CA  SER A 344      26.520  10.838  30.656  1.00 28.36      A
ATOM   2168  CB  SER A 344      25.129  11.089  30.067  1.00 28.73      A
ATOM   2169  OG  SER A 344      25.203  11.942  28.940  1.00 30.91      A
ATOM   2170  C   SER A 344      27.407  10.214  29.577  1.00 27.66      A
ATOM   2171  O   SER A 344      26.987   9.281  28.900  1.00 28.66      A
ATOM   2172  N   VAL A 345      28.627  10.715  29.419  1.00 26.75      A
ATOM   2173  CA  VAL A 345      29.534  10.183  28.402  1.00 23.44      A
ATOM   2174  CB  VAL A 345      30.565  11.256  27.950  1.00 23.10      A
ATOM   2175  CG1 VAL A 345      31.589  10.631  26.995  1.00 22.24      A
ATOM   2176  CG2 VAL A 345      29.854  12.418  27.275  1.00 20.05      A
ATOM   2177  C   VAL A 345      30.326   8.957  28.855  1.00 24.26      A
ATOM   2178  O   VAL A 345      30.876   8.930  29.960  1.00 22.83      A
ATOM   2179  N   THR A 346      30.374   7.942  27.997  1.00 21.77      A
ATOM   2180  CA  THR A 346      31.153   6.740  28.272  1.00 23.70      A
ATOM   2181  CB  THR A 346      30.391   5.455  27.857  1.00 26.53      A
ATOM   2182  OG1 THR A 346      29.248   5.284  28.706  1.00 29.98      A
ATOM   2183  CG2 THR A 346      31.289   4.231  27.990  1.00 24.28      A
ATOM   2184  C   THR A 346      32.383   6.945  27.385  1.00 23.43      A
ATOM   2185  O   THR A 346      32.306   6.827  26.160  1.00 24.50      A
ATOM   2186  N   TRP A 347      33.508   7.270  28.013  1.00 22.98      A
ATOM   2187  CA  TRP A 347      34.744   7.569  27.300  1.00 23.81      A
ATOM   2188  CB  TRP A 347      35.683   8.352  28.219  1.00 22.54      A
ATOM   2189  CG  TRP A 347      35.128   9.658  28.693  1.00 20.61      A
ATOM   2190  CD2 TRP A 347      35.257  10.927  28.040  1.00 19.11      A
ATOM   2191  CE2 TRP A 347      34.581  11.881  28.838  1.00 18.39      A
ATOM   2192  CE3 TRP A 347      35.878  11.351  26.858  1.00 18.16      A
ATOM   2193  CD1 TRP A 347      34.397   9.883  29.828  1.00 18.35      A
ATOM   2194  NE1 TRP A 347      34.065  11.218  29.923  1.00 19.51      A
ATOM   2195  CZ2 TRP A 347      34.510  13.234  28.491  1.00 16.88      A
ATOM   2196  CZ3 TRP A 347      35.808  12.701  26.511  1.00 17.23      A
ATOM   2197  CH2 TRP A 347      35.127  13.624  27.327  1.00 18.16      A
ATOM   2198  C   TRP A 347      35.538   6.429  26.675  1.00 25.79      A
ATOM   2199  O   TRP A 347      36.304   6.654  25.742  1.00 24.67      A
ATOM   2200  N   ALA A 348      35.360   5.215  27.183  1.00 27.10      A
ATOM   2201  CA  ALA A 348      36.116   4.063  26.697  1.00 27.46      A
ATOM   2202  CB  ALA A 348      35.899   2.869  27.636  1.00 27.09      A
ATOM   2203  C   ALA A 348      35.895   3.620  25.256  1.00 27.18      A
ATOM   2204  O   ALA A 348      36.830   3.148  24.613  1.00 29.41      A
ATOM   2205  N   ASN A 349      34.682   3.769  24.735  1.00 26.55      A
ATOM   2206  CA  ASN A 349      34.418   3.310  23.375  1.00 27.28      A
ATOM   2207  CB  ASN A 349      33.700   1.962  23.444  1.00 29.37      A
ATOM   2208  CG  ASN A 349      32.299   2.088  24.013  1.00 30.92      A
ATOM   2209  OD1 ASN A 349      32.045   2.942  24.859  1.00 30.17      A
ATOM   2210  ND2 ASN A 349      31.386   1.237  23.553  1.00 33.52      A
ATOM   2211  C   ASN A 349      33.599   4.265  22.509  1.00 26.47      A
ATOM   2212  O   ASN A 349      32.669   3.843  21.819  1.00 25.87      A
ATOM   2213  N   LEU A 350      33.947   5.543  22.518  1.00 24.45      A
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ATOM   2214  CA  LEU A 350      33.203   6.510  21.721  1.00 23.14      A
ATOM   2215  CB  LEU A 350      33.837   7.898  21.848  1.00 23.22      A
ATOM   2216  CG  LEU A 350      33.659   8.605  23.191  1.00 21.05      A
ATOM   2217  CD1 LEU A 350      34.646   9.756  23.293  1.00 19.36      A
ATOM   2218  CD2 LEU A 350      32.220   9.094  23.319  1.00 18.78      A
ATOM   2219  C   LEU A 350      33.082   6.152  20.240  1.00 22.60      A
ATOM   2220  O   LEU A 350      32.011   6.296  19.650  1.00 21.15      A
ATOM   2221  N   HIS A 351      34.165   5.689  19.627  1.00 23.13      A
ATOM   2222  CA  HIS A 351      34.089   5.387  18.204  1.00 27.83      A
ATOM   2223  CB  HIS A 351      35.506   5.325  17.596  1.00 29.36      A
ATOM   2224  CG  HIS A 351      36.082   3.950  17.493  1.00 32.07      A
ATOM   2225  CD2 HIS A 351      36.611   3.128  18.431  1.00 32.39      A
ATOM   2226  ND1 HIS A 351      36.197   3.285  16.291  1.00 33.02      A
ATOM   2227  CE1 HIS A 351      36.775   2.113  16.493  1.00 33.58      A
ATOM   2228  NE2 HIS A 351      37.036   1.992  17.782  1.00 31.76      A
ATOM   2229  C   HIS A 351      33.258   4.144  17.874  1.00 28.12      A
ATOM   2230  O   HIS A 351      33.015   3.847  16.707  1.00 29.49      A
ATOM   2231  N   GLN A 352      32.800   3.442  18.908  1.00 29.28      A
ATOM   2232  CA  GLN A 352      31.963   2.255  18.726  1.00 29.67      A
ATOM   2233  CB  GLN A 352      32.366   1.145  19.694  1.00 30.56      A
ATOM   2234  CG  GLN A 352      33.169   0.041  19.041  1.00 30.88      A
ATOM   2235  CD  GLN A 352      34.493  -0.186  19.729  1.00 31.21      A
ATOM   2236  OE1 GLN A 352      34.541  -0.450  20.928  1.00 30.76      A
ATOM   2237  NE2 GLN A 352      35.578  -0.084  18.971  1.00 32.30      A
ATOM   2238  C   GLN A 352      30.504   2.638  18.963  1.00 30.42      A
ATOM   2239  O   GLN A 352      29.595   1.831  18.770  1.00 29.01      A
ATOM   2240  N   GLN A 353      30.290   3.875  19.397  1.00 27.64      A
ATOM   2241  CA  GLN A 353      28.948   4.365  19.652  1.00 27.42      A
ATOM   2242  CB  GLN A 353      28.977   5.401  20.775  1.00 25.77      A
ATOM   2243  CG  GLN A 353      29.408   4.837  22.115  1.00 27.34      A
ATOM   2244  CD  GLN A 353      29.638   5.914  23.156  1.00 27.19      A
ATOM   2245  OE1 GLN A 353      28.875   6.872  23.252  1.00 28.29      A
ATOM   2246  NE2 GLN A 353      30.687   5.753  23.951  1.00 28.79      A
ATOM   2247  C   GLN A 353      28.375   4.989  18.385  1.00 29.00      A
ATOM   2248  O   GLN A 353      29.118   5.455  17.516  1.00 29.14      A
ATOM   2249  N   THR A 354      27.053   4.984  18.276  1.00 27.31      A
ATOM   2250  CA  THR A 354      26.390   5.568  17.119  1.00 27.85      A
ATOM   2251  CB  THR A 354      24.991   4.941  16.904  1.00 30.69      A
ATOM   2252  OG1 THR A 354      25.132   3.532  16.665  1.00 30.07      A
ATOM   2253  CG2 THR A 354      24.289   5.585  15.709  1.00 29.58      A
ATOM   2254  C   THR A 354      26.244   7.062  17.376  1.00 26.85      A
ATOM   2255  O   THR A 354      25.592   7.475  18.329  1.00 25.77      A
ATOM   2256  N   PRO A 355      26.867   7.898  16.533  1.00 27.22      A
ATOM   2257  CD  PRO A 355      27.792   7.588  15.431  1.00 25.89      A
ATOM   2258  CA  PRO A 355      26.763   9.346  16.734  1.00 27.23      A
ATOM   2259  CB  PRO A 355      27.625   9.915  15.609  1.00 24.91      A
ATOM   2260  CG  PRO A 355      28.643   8.838  15.385  1.00 25.54      A
ATOM   2261  C   PRO A 355      25.322   9.837  16.641  1.00 28.07      A
ATOM   2262  O   PRO A 355      24.548   9.364  15.810  1.00 27.24      A
ATOM   2263  N   PRO A 356      24.941  10.792  17.500  1.00 28.28      A
ATOM   2264  CD  PRO A 356      25.752  11.560  18.462  1.00 28.31      A
ATOM   2265  CA  PRO A 356      23.572  11.306  17.448  1.00 28.44      A
ATOM   2266  CB  PRO A 356      23.539  12.301  18.604  1.00 28.11      A
ATOM   2267  CG  PRO A 356      24.946  12.832  18.612  1.00 26.86      A
ATOM   2268  C   PRO A 356      23.363  11.978  16.097  1.00 29.25      A
ATOM   2269  O   PRO A 356      24.304  12.537  15.529  1.00 27.27      A
ATOM   2270  N   ALA A 357      22.143  11.910  15.575  1.00 30.45      A
ATOM   2271  CA  ALA A 357      21.848  12.521  14.287  1.00 32.81      A
ATOM   2272  CB  ALA A 357      20.507  12.019  13.757  1.00 31.99      A
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ATOM   2273  C   ALA A 357      21.824  14.035  14.448  1.00 35.05      A
ATOM   2274  O   ALA A 357      21.194  14.561  15.369  1.00 35.04      A
ATOM   2275  N   LEU A 358      22.516  14.730  13.552  1.00 37.81      A
ATOM   2276  CA  LEU A 358      22.578  16.185  13.597  1.00 42.15      A
ATOM   2277  CB  LEU A 358      23.679  16.681  12.658  1.00 39.54      A
ATOM   2278  CG  LEU A 358      25.086  16.285  13.109  1.00 39.51      A
ATOM   2279  CD1 LEU A 358      26.102  16.686  12.062  1.00 39.29      A
ATOM   2280  CD2 LEU A 358      25.395  16.953  14.445  1.00 40.01      A
ATOM   2281  C   LEU A 358      21.241  16.837  13.242  1.00 45.91      A
ATOM   2282  O   LEU A 358      20.874  16.927  12.069  1.00 45.71      A
ATOM   2283  N   THR A 359      20.530  17.290  14.275  1.00 50.06      A
ATOM   2284  CA  THR A 359      19.223  17.939  14.140  1.00 53.73      A
ATOM   2285  CB  THR A 359      19.353  19.428  13.726  1.00 54.04      A
ATOM   2286  OG1 THR A 359      19.995  19.521  12.448  1.00 56.35      A
ATOM   2287  CG2 THR A 359      20.158  20.204  14.763  1.00 54.32      A
ATOM   2288  C   THR A 359      18.309  17.236  13.139  1.00 54.47      A
ATOM   2289  O   THR A 359      18.483  16.016  12.930  1.00 55.90      A
ATOM   2290  OXT THR A 359      17.407  17.908  12.595  1.00 56.97      A
ATOM   2291  OH2 TIP S   1      42.566  19.118  34.302  1.00 15.09      S
ATOM   2292  OH2 TIP S   2      41.052  32.378  19.857  1.00 15.82      S
ATOM   2293  OH2 TIP S   3      37.014  33.030  17.747  1.00 16.95      S
ATOM   2294  OH2 TIP S   5      45.353  24.370  18.152  1.00 16.85      S
ATOM   2295  OH2 TIP S   6      31.896  13.930  33.235  1.00 20.42      S
ATOM   2296  OH2 TIP S   7      50.351  22.781  28.249  1.00 21.14      S
ATOM   2297  OH2 TIP S   8      45.246  -0.589  -0.734  1.00 17.74      S
ATOM   2298  OH2 TIP S  11      46.249  -0.348  -8.523  1.00 21.32      S
ATOM   2299  OH2 TIP S  14      45.756  11.148  29.680  1.00 21.94      S
ATOM   2300  OH2 TIP S  15      44.273  13.157  34.592  1.00 15.61      S
ATOM   2301  OH2 TIP S  17      53.598   3.722  -1.720  1.00 21.45      S
ATOM   2302  OH2 TIP S  18      46.049  13.087  31.565  1.00 20.35      S
ATOM   2303  OH2 TIP S  19      53.422  22.401  -3.280  1.00 23.26      S
ATOM   2304  OH2 TIP S  20      34.587   7.922   5.383  1.00 22.58      S
ATOM   2305  OH2 TIP S  21      45.053  27.379  19.376  1.00 29.60      S
ATOM   2306  OH2 TIP S  23      28.899  36.416  28.633  1.00 31.68      S
ATOM   2307  OH2 TIP S  24      35.531  11.645  -8.219  1.00 23.45      S
ATOM   2308  OH2 TIP S  25      47.364  28.787  19.612  1.00 23.03      S
ATOM   2309  OH2 TIP S  27      48.859  21.588  12.634  1.00 23.76      S
ATOM   2310  OH2 TIP S  29      48.805   8.920  23.626  1.00 22.23      S
ATOM   2311  OH2 TIP S  31      48.619   7.247  10.112  1.00 21.32      S
ATOM   2312  OH2 TIP S  34      44.824  28.720  15.621  1.00 25.27      S
ATOM   2313  OH2 TIP S  35      26.030  12.634  13.407  1.00 21.61      S
ATOM   2314  OH2 TIP S  36      50.462  19.810  40.066  1.00 25.45      S
ATOM   2315  OH2 TIP S  37      39.631  23.510  -0.239  1.00 30.88      S
ATOM   2316  OH2 TIP S  40      44.734  42.655  10.346  1.00 30.84      S
ATOM   2317  OH2 TIP S  41      54.653   3.902   1.503  1.00 27.14      S
ATOM   2318  OH2 TIP S  45      45.693  21.923  39.754  1.00 28.30      S
ATOM   2319  OH2 TIP S  47      47.820  16.413   7.805  1.00 25.73      S
ATOM   2320  OH2 TIP S  48      50.292  31.412  29.642  1.00 32.79      S
ATOM   2321  OH2 TIP S  49      26.056  16.646  34.827  1.00 29.80      S
ATOM   2322  OH2 TIP S  52      31.714  10.996  31.855  1.00 29.15      S
ATOM   2323  OH2 TIP S  53      46.108  23.843  -4.299  1.00 24.21      S
ATOM   2324  OH2 TIP S  54      37.645  11.206  34.448  1.00 28.56      S
ATOM   2325  OH2 TIP S  55      26.371  28.513  12.142  1.00 32.08      S
ATOM   2326  OH2 TIP S  58      33.564  19.700   3.483  1.00 28.28      S
ATOM   2327  OH2 TIP S  64      48.295  -0.632  14.280  1.00 32.13      S
ATOM   2328  OH2 TIP S  65      40.064  26.036  34.324  1.00 24.17      S
ATOM   2329  OH2 TIP S  66      29.570   3.958  14.729  1.00 28.94      S
ATOM   2330  OH2 TIP S  72      60.085  11.604   6.814  1.00 38.35      S
ATOM   2331  OH2 TIP S  73      39.203  44.403  18.686  1.00 26.61      S
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	ATOM	2332	OH2	TIP	S	76	47.312	12.366	27.366	1.00	28.51	S
	ATOM	2333	OH2	TIP	S	80	43.862	33.771	33.329	1.00	28.82	S
	ATOM	2334	OH2	TIP	S	81	57.890	13.106	2.128	1.00	40.62	S
	ATOM	2335	OH2	TIP	S	82	41.663	34.381	32.043	1.00	19.35	S
5	ATOM	2336	OH2	TIP	S	85	50.974	40.331	19.200	1.00	21.14	S
	ATOM	2337	OH2	TIP	S	88	47.925	-0.832	-6.556	1.00	24.11	S
	ATOM	2338	OH2	TIP	S	90	27.231	28.336	33.481	1.00	27.64	S
	ATOM	2339	OH2	TIP	S	91	43.651	-7.101	-7.995	1.00	24.33	S
	ATOM	2340	OH2	TIP	S	92	49.325	4.387	19.370	1.00	28.02	S
10	ATOM	2341	OH2	TIP	S	93	46.231	11.549	33.898	1.00	29.40	S
	ATOM	2342	OH2	TIP	S	94	63.889	24.831	1.168	1.00	26.53	S
	ATOM	2343	OH2	TIP	S	96	56.396	4.952	-6.749	1.00	28.00	S
	ATOM	2344	OH2	TIP	S	98	35.510	27.986	11.558	1.00	29.24	S
	ATOM	2345	OH2	TIP	S	100	49.942	24.366	30.265	1.00	31.61	S
15	ATOM	2346	OH2	TIP	S	101	56.121	7.113	-8.298	1.00	31.57	S
	ATOM	2347	OH2	TIP	S	102	58.318	19.957	-8.378	1.00	26.95	S
	ATOM	2348	OH2	TIP	S	103	49.647	22.446	39.624	1.00	40.57	S
	ATOM	2349	OH2	TIP	S	104	45.359	7.052	13.052	1.00	26.27	S
	ATOM	2350	OH2	TIP	S	105	37.150	32.340	32.346	1.00	34.45	S
20	ATOM	2351	OH2	TIP	S	107	43.465	40.457	8.240	1.00	40.48	S
	ATOM	2352	OH2	TIP	S	119	36.644	8.257	13.418	1.00	30.70	S
	ATOM	2353	OH2	TIP	S	123	41.912	-8.974	-8.264	1.00	26.08	S
	ATOM	2354	OH2	TIP	S	124	62.424	15.800	-7.411	1.00	24.08	S
	ATOM	2355	OH2	TIP	S	126	37.266	18.656	-9.097	1.00	28.99	S
25	ATOM	2356	OH2	TIP	S	127	43.129	26.845	14.606	1.00	25.19	S
	ATOM	2357	OH2	TIP	S	128	36.339	32.639	29.802	1.00	29.25	S
	ATOM	2358	OH2	TIP	S	130	54.051	14.561	26.498	1.00	33.93	S
	ATOM	2359	OH2	TIP	S	131	41.805	-4.242	5.492	1.00	33.72	S
	ATOM	2360	OH2	TIP	S	133	38.873	25.163	36.697	1.00	30.69	S
30	ATOM	2361	OH2	TIP	S	134	28.777	8.553	25.307	1.00	31.43	S
	ATOM	2362	OH2	TIP	S	135	53.672	10.546	-12.803	1.00	33.45	S
	ATOM	2363	OH2	TIP	S	136	59.892	15.434	11.467	1.00	31.39	S
	ATOM	2364	OH2	TIP	S	137	31.040	12.361	35.470	1.00	34.07	S
	ATOM	2365	OH2	TIP	S	139	33.489	14.292	-0.598	1.00	40.68	S
35	ATOM	2366	OH2	TIP	S	140	46.918	8.748	11.662	1.00	29.23	S
	ATOM	2367	OH2	TIP	S	141	46.297	-7.287	-9.196	1.00	42.20	S
	ATOM	2368	OH2	TIP	S	142	58.193	6.715	-4.685	1.00	35.48	S
	ATOM	2369	OH2	TIP	S	143	44.598	4.435	12.503	1.00	27.68	S
	ATOM	2370	OH2	TIP	S	144	27.003	5.999	12.450	1.00	36.30	S
40	ATOM	2371	OH2	TIP	S	145	43.676	32.852	35.735	1.00	35.70	S
	ATOM	2372	OH2	TIP	S	146	35.783	18.628	36.452	1.00	34.62	S
	ATOM	2373	OH2	TIP	S	147	25.402	4.058	20.638	1.00	45.03	S
	ATOM	2374	OH2	TIP	S	148	45.839	35.853	33.724	1.00	35.47	S
	ATOM	2375	OH2	TIP	S	149	22.176	18.976	16.752	1.00	31.87	S
45	ATOM	2376	OH2	TIP	S	150	43.986	33.179	10.162	1.00	37.70	S
	ATOM	2377	OH2	TIP	S	151	50.653	20.347	42.428	1.00	35.80	S
	ATOM	2378	OH2	TIP	S	152	47.843	24.314	9.506	1.00	31.05	S
	ATOM	2379	OH2	TIP	S	153	44.693	5.273	-14.175	1.00	29.90	S
	ATOM	2380	OH2	TIP	S	155	26.560	36.851	31.684	1.00	49.29	S
50	ATOM	2381	OH2	TIP	S	156	46.867	8.019	-12.951	1.00	29.21	S
	ATOM	2382	OH2	TIP	S	157	30.432	28.741	12.438	1.00	37.76	S
	ATOM	2383	OH2	TIP	S	158	41.004	20.553	6.423	1.00	39.53	S
	ATOM	2384	OH2	TIP	S	159	49.258	20.069	29.294	1.00	33.97	S
	ATOM	2385	OH2	TIP	S	160	48.082	28.459	16.489	1.00	33.10	S
55	ATOM	2386	OH2	TIP	S	161	47.448	18.625	27.683	1.00	34.87	S
	ATOM	2387	OH2	TIP	S	162	19.687	20.632	23.411	1.00	35.01	S
	ATOM	2388	OH2	TIP	S	163	32.402	-1.266	22.443	1.00	37.26	S
	ATOM	2389	OH2	TIP	S	164	39.475	33.468	33.237	1.00	35.34	S
	ATOM	2390	OH2	TIP	S	165	44.277	18.950	5.162	1.00	45.14	S

	ATOM	2391	OH2	TIP	S	166	34.797	30.523	10.736	1.00 47.55	S
	ATOM	2392	OH2	TIP	S	167	46.541	3.526	-14.949	1.00 26.54	S
	ATOM	2393	OH2	TIP	S	168	36.333	16.371	1.539	1.00 38.68	S
	ATOM	2394	OH2	TIP	S	169	46.761	38.936	27.403	1.00 34.66	S
5	ATOM	2395	OH2	TIP	S	170	24.163	13.264	11.375	1.00 41.23	S
	ATOM	2396	OH2	TIP	S	171	48.459	15.018	31.951	1.00 38.11	S
	ATOM	2397	OH2	TIP	S	172	34.261	23.193	40.004	1.00 48.96	S
	ATOM	2398	OH2	TIP	S	173	45.924	-0.026	13.224	1.00 39.55	S
	ATOM	2399	OH2	TIP	S	175	41.384	37.389	32.543	1.00 40.74	S
10	ATOM	2400	OH2	TIP	S	177	49.394	35.312	27.150	1.00 44.33	S
	ATOM	2401	OH2	TIP	S	178	29.066	29.942	34.359	1.00 41.46	S
	ATOM	2402	OH2	TIP	S	180	49.354	19.467	7.273	1.00 34.56	S
	ATOM	2403	OH2	TIP	S	181	25.298	17.029	31.863	1.00 47.74	S
	ATOM	2404	OH2	TIP	S	182	37.071	25.027	4.669	1.00 43.87	S
15	ATOM	2405	OH2	TIP	S	183	22.581	7.487	18.691	1.00 41.75	S
	ATOM	2406	OH2	TIP	S	184	32.269	7.011	-1.891	1.00 48.84	S
	ATOM	2407	OH2	TIP	S	185	48.234	0.494	6.833	1.00 48.16	S
	ATOM	2408	OH2	TIP	S	187	20.008	14.658	19.211	1.00 45.27	S
	ATOM	2409	OH2	TIP	S	188	49.341	22.698	42.272	1.00 42.20	S
20	ATOM	2410	OH2	TIP	S	190	61.292	18.260	-8.097	1.00 45.21	S
	ATOM	2411	OH2	TIP	S	191	28.152	10.606	2.819	1.00 40.38	S
	ATOM	2412	OH2	TIP	S	192	25.626	12.619	23.191	1.00 34.27	S
	ATOM	2413	OH2	TIP	S	193	59.876	11.603	1.216	1.00 46.54	S
	ATOM	2414	OH2	TIP	S	194	57.592	21.183	-10.646	1.00 45.82	S
25	ATOM	2415	OH2	TIP	S	195	31.509	36.649	21.499	1.00 38.73	S
	ATOM	2416	OH2	TIP	S	197	50.270	-1.543	-6.136	1.00 42.66	S
	ATOM	2417	OH2	TIP	S	198	24.467	8.729	13.088	1.00 42.78	S
	ATOM	2418	OH2	TIP	S	199	38.098	8.699	25.759	1.00 32.80	S
	ATOM	2419	OH2	TIP	S	200	57.831	11.358	-13.255	1.00 45.31	S
30	ATOM	2420	OH2	TIP	S	201	23.888	22.328	30.524	1.00 37.12	S
	ATOM	2421	OH2	TIP	S	202	47.691	26.068	37.666	1.00 37.92	S
	ATOM	2422	OH2	TIP	S	203	38.653	7.070	29.307	1.00 50.54	S
	ATOM	2423	OH2	TIP	S	206	44.424	27.583	2.092	1.00 53.50	S
	ATOM	2424	OH2	TIP	S	212	22.258	2.296	17.948	1.00 47.38	S
35	ATOM	2425	OH2	TIP	S	214	19.843	17.943	23.303	1.00 30.36	S
	ATOM	2426	OH2	TIP	S	216	27.647	11.344	24.681	1.00 31.32	S
	ATOM	2427	OH2	TIP	S	217	37.953	7.817	-9.284	1.00 45.97	S
	ATOM	2428	OH2	TIP	S	218	33.845	34.040	12.124	1.00 38.11	S
	ATOM	2429	OH2	TIP	S	219	58.484	15.269	13.717	1.00 38.26	S
40	ATOM	2430	OH2	TIP	S	220	48.526	40.920	26.583	1.00 35.23	S
	ATOM	2431	OH2	TIP	S	222	52.094	21.184	38.122	1.00 29.86	S
	ATOM	2432	OH2	TIP	S	223	36.889	5.881	3.281	1.00 37.63	S
	ATOM	2433	OH2	TIP	S	224	47.642	-1.401	-10.684	1.00 34.89	S
	ATOM	2434	OH2	TIP	S	226	47.284	2.916	19.133	1.00 34.10	S
45	ATOM	2435	OH2	TIP	S	227	42.468	4.463	-15.039	1.00 37.98	S
	ATOM	2436	OH2	TIP	S	228	19.169	22.832	21.831	1.00 41.57	S
	ATOM	2437	OH2	TIP	S	231	57.592	12.689	14.880	1.00 50.22	S
	ATOM	2438	OH2	TIP	S	232	27.102	9.176	5.655	1.00 40.57	S
	ATOM	2439	OH2	TIP	S	233	58.618	9.072	-11.925	1.00 50.71	S
50	ATOM	2440	OH2	TIP	S	234	22.822	25.342	19.945	1.00 34.93	S
	ATOM	2441	OH2	TIP	S	236	24.831	32.218	28.901	1.00 37.69	S
	ATOM	2442	OH2	TIP	S	237	20.045	10.774	16.992	1.00 39.57	S
	ATOM	2443	OH2	TIP	S	238	58.019	19.850	15.679	1.00 41.42	S
	ATOM	2444	OH2	TIP	S	239	19.490	20.949	26.114	1.00 34.55	S
55	ATOM	2445	OH2	TIP	S	240	61.187	26.377	7.346	1.00 39.68	S
	ATOM	2446	OH2	TIP	S	241	33.680	38.342	19.389	1.00 48.93	S
	ATOM	2447	OH2	TIP	S	242	51.539	31.612	10.881	1.00 55.65	S
	ATOM	2448	OH2	TIP	S	244	25.872	14.431	30.404	1.00 46.69	S
	ATOM	2449	OH2	TIP	S	248	37.332	5.849	9.544	1.00 43.81	S

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ATOM   2450  OH2 TIP S 250      39.087  -1.293  -9.655  1.00 42.96      S
ATOM   2451  OH2 TIP S 258      23.938  30.000  30.010  1.00 38.89      S
ATOM   2452  OH2 TIP S 259      24.949  29.749  32.578  1.00 40.17      S
ATOM   2453  OH2 TIP S 260      32.111  17.986   1.918  1.00 48.36      S
ATOM   2454  OH2 TIP S 266      21.404  12.876  25.603  1.00 57.17      S
ATOM   2455  OH2 TIP S 269      35.425  36.767  12.550  1.00 30.70      S
ATOM   2456  OH2 TIP S 270      52.438  25.529  30.131  1.00 44.85      S
ATOM   2457  OH2 TIP S 271      53.299  20.156  36.003  1.00 37.15      S
ATOM   2458  OH2 TIP S 272      50.914   6.919  23.723  1.00 43.29      S
ATOM   2459  OH2 TIP S 274      31.578  30.795  11.014  1.00 50.15      S
ATOM   2460  OH2 TIP S 275      26.341   7.243  22.447  1.00 39.40      S
ATOM   2461  OH2 TIP S 276      60.392  18.195  10.235  1.00 37.91      S
ATOM   2462  OH2 TIP S 277      47.355  -9.081 -10.821  1.00 48.18      S
ATOM   2463  OH2 TIP S 279      41.304   6.175 -16.647  1.00 38.12      S
ATOM   2464  OH2 TIP S 282      33.299  21.620  37.881  1.00 46.29      S
ATOM   2465  OH2 TIP S 283      56.469  26.112  -8.575  1.00 43.71      S
ATOM   2466  OH2 TIP S 287      48.382  26.573   7.246  1.00 41.43      S
ATOM   2467  OH2 TIP S 288      56.240   7.245 -11.331  1.00 41.79      S
ATOM   2468  OH2 TIP S 290      49.060  14.978  28.166  1.00 37.03      S
ATOM   2469  OH2 TIP S 291      37.095  44.270  26.442  1.00 45.08      S
ATOM   2470  OH2 TIP S 292      47.814  -0.384 -13.299  1.00 48.60      S
ATOM   2471  OH2 TIP S 297      58.081   2.784  -7.841  1.00 41.89      S
ATOM   2472  OH2 TIP S 298      36.447  45.321  18.644  1.00 54.91      S
ATOM   2473  OH2 TIP S 299      49.029  23.328   1.767  1.00 30.55      S
ATOM   2474  OH2 TIP S 301      24.375  13.771   8.634  1.00 48.47      S
ATOM   2475  OH2 TIP S 303      47.904  36.798  28.653  1.00 35.76      S
ATOM   2476  OH2 TIP S 305      51.156  40.821  27.172  1.00 43.59      S
ATOM   2477  OH2 TIP S 306      32.943  28.917  35.227  1.00 42.60      S
ATOM   2478  OH2 TIP S 307      58.462  28.373   6.251  1.00 46.15      S
ATOM   2479  OH2 TIP S 308      41.964  30.940  36.712  1.00 48.26      S
ATOM   2480  OH2 TIP S 313      51.176  -1.922  -3.336  1.00 50.61      S
ATOM   2481  OH2 TIP S1001     21.319  36.868  23.805  1.00 36.97      S
ATOM   2482  OH2 TIP S1002     48.880  32.620  27.617  1.00 44.40      S
ATOM   2483  OH2 TIP S1003     61.880  19.473  11.767  1.00 45.49      S
ATOM   2484  OH2 TIP S1004     52.770  21.424  26.815  1.00 24.43      S
ATOM   2485  OH2 TIP S1005     35.373  29.094  36.197  1.00 35.97      S
ATOM   2486  OH2 TIP S1006     40.815  -6.636   4.389  1.00 43.15      S
ATOM   2487  OH2 TIP S1007     44.953   1.286  11.272  1.00 49.45      S
ATOM   2488  OH2 TIP S1010     21.004  16.168  27.009  1.00 48.51      S
ATOM   2489  OH2 TIP S1011     47.094  41.786   9.243  1.00 50.10      S
ATOM   2490  OH2 TIP S1012     32.479   2.978  14.158  1.00 49.47      S
ATOM   2491  O12 GLC G   1     48.557  11.372 -12.279  1.00 40.72      G
ATOM   2492  C11 GLC G   1     48.836  12.133 -11.097  1.00 38.05      G
ATOM   2493  C13 GLC G   1     49.266  13.554 -11.476  1.00 38.09      G
ATOM   2494  O14 GLC G   1     49.559  14.299 -10.292  1.00 33.99      G
ATOM   2495  C15 GLC G   1     48.150  14.257 -12.257  1.00 37.32      G
ATOM   2496  O16 GLC G   1     48.574  15.582 -12.604  1.00 36.74      G
ATOM   2497  O12 GLC G   2     40.114  -6.634  -6.562  1.00 33.52      G
ATOM   2498  C11 GLC G   2     38.967  -6.592  -7.404  1.00 31.05      G
ATOM   2499  C13 GLC G   2     37.712  -6.417  -6.552  1.00 31.56      G
ATOM   2500  O14 GLC G   2     36.554  -6.406  -7.389  1.00 30.70      G
ATOM   2501  C15 GLC G   2     37.792  -5.109  -5.761  1.00 30.03      G
ATOM   2502  O16 GLC G   2     36.609  -4.961  -4.975  1.00 29.66      G
ATOM   2503  O12 GLC G   3     44.030   8.243 -13.470  1.00 37.90      G
ATOM   2504  C11 GLC G   3     43.950   9.648 -13.690  1.00 38.47      G
ATOM   2505  C13 GLC G   3     42.747   9.974 -14.579  1.00 39.52      G
ATOM   2506  O14 GLC G   3     41.551   9.526 -13.942  1.00 39.39      G
ATOM   2507  C15 GLC G   3     42.878   9.280 -15.934  1.00 41.43      G
ATOM   2508  O16 GLC G   3     41.736   9.613 -16.731  1.00 40.78      G
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ATOM   2509  O12 GLC G   5      40.556   1.005   2.289  1.00 45.25      G
ATOM   2510  C11 GLC G   5      40.966   2.332   1.960  1.00 40.56      G
ATOM   2511  C13 GLC G   5      40.187   3.327   2.814  1.00 40.36      G
ATOM   2512  O14 GLC G   5      38.791   3.169   2.572  1.00 40.71      G
ATOM   2513  C15 GLC G   5      40.619   4.751   2.464  1.00 40.04      G
ATOM   2514  O16 GLC G   5      39.885   5.681   3.256  1.00 36.89      G
ATOM   2515  O12 GLC G   6      36.951  22.702  40.046  1.00 63.04      G
ATOM   2516  C11 GLC G   6      37.592  21.583  39.422  1.00 62.46      G
ATOM   2517  C13 GLC G   6      38.104  21.978  38.030  1.00 61.14      G
ATOM   2518  O14 GLC G   6      39.034  23.054  38.168  1.00 61.72      G
ATOM   2519  C15 GLC G   6      36.948  22.429  37.126  1.00 60.51      G
ATOM   2520  O16 GLC G   6      35.992  21.372  36.960  1.00 58.61      G
ATOM   2521  O12 GLC G   7      37.316   0.281  14.299  1.00 73.45      G
ATOM   2522  C11 GLC G   7      37.655  -0.758  15.222  1.00 72.78      G
ATOM   2523  C13 GLC G   7      36.592  -1.856  15.157  1.00 72.98      G
ATOM   2524  O14 GLC G   7      35.320  -1.299  15.498  1.00 73.88      G
ATOM   2525  C15 GLC G   7      36.924  -2.989  16.134  1.00 73.66      G
ATOM   2526  O16 GLC G   7      36.972  -2.493  17.478  1.00 75.38      G
ATOM   2527  O12 GLC G   8      51.921  21.898   5.908  1.00 62.51      G
ATOM   2528  C11 GLC G   8      52.447  20.871   5.063  1.00 63.42      G
ATOM   2529  C13 GLC G   8      51.476  20.597   3.908  1.00 64.28      G
ATOM   2530  O14 GLC G   8      51.297  21.794   3.150  1.00 66.28      G
ATOM   2531  C15 GLC G   8      50.121  20.137   4.448  1.00 64.49      G
ATOM   2532  O16 GLC G   8      49.233  19.886   3.357  1.00 64.01      G
ATOM   2533  O12 GLC G  10      36.044  37.499  29.523  1.00 56.89      G
ATOM   2534  C11 GLC G  10      35.164  36.645  30.259  1.00 56.97      G
ATOM   2535  C13 GLC G  10      33.849  36.489  29.494  1.00 56.11      G
ATOM   2536  O14 GLC G  10      33.248  37.772  29.308  1.00 56.44      G
ATOM   2537  C15 GLC G  10      32.900  35.580  30.277  1.00 55.84      G
ATOM   2538  O16 GLC G  10      31.674  35.442  29.557  1.00 55.39      G
ATOM   2539  O3G ATP N   1      46.280  25.658   5.170  1.00 51.49      N
ATOM   2540  PG  ATP N   1      46.464  25.053   3.691  1.00 52.22      N
ATOM   2541  O1G ATP N   1      47.406  23.911   3.763  1.00 51.41      N
ATOM   2542  O2G ATP N   1      46.794  26.182   2.784  1.00 52.07      N
ATOM   2543  O3B ATP N   1      44.976  24.513   3.344  1.00 51.01      N
ATOM   2544  PB  ATP N   1      44.560  22.969   3.605  1.00 50.20      N
ATOM   2545  O1B ATP N   1      43.083  22.898   3.669  1.00 49.41      N
ATOM   2546  O2B ATP N   1      45.345  22.474   4.766  1.00 50.34      N
ATOM   2547  O3A ATP N   1      45.070  22.231   2.255  1.00 47.77      N
ATOM   2548  PA  ATP N   1      45.075  20.613   2.121  1.00 42.84      N
ATOM   2549  O1A ATP N   1      45.547  20.291   0.754  1.00 43.81      N
ATOM   2550  O2A ATP N   1      45.807  20.035   3.270  1.00 45.03      N
ATOM   2551  O5* ATP N   1      43.516  20.223   2.245  1.00 41.73      N
ATOM   2552  C5* ATP N   1      42.528  20.925   1.489  1.00 37.57      N
ATOM   2553  C4* ATP N   1      41.127  20.379   1.776  1.00 39.45      N
ATOM   2554  O4* ATP N   1      40.907  19.024   1.279  1.00 37.72      N
ATOM   2555  C3* ATP N   1      40.777  20.321   3.251  1.00 38.48      N
ATOM   2556  O3* ATP N   1      40.360  21.615   3.697  1.00 40.42      N
ATOM   2557  C2* ATP N   1      39.608  19.374   3.270  1.00 37.58      N
ATOM   2558  O2* ATP N   1      38.410  20.076   2.924  1.00 35.98      N
ATOM   2559  C1* ATP N   1      39.939  18.346   2.173  1.00 35.55      N
ATOM   2560  N9  ATP N   1      40.628  17.156   2.747  1.00 31.76      N
ATOM   2561  C8  ATP N   1      41.864  17.126   3.274  1.00 30.49      N
ATOM   2562  N7  ATP N   1      42.143  15.877   3.667  1.00 29.75      N
ATOM   2563  C5  ATP N   1      41.088  15.118   3.390  1.00 27.49      N
ATOM   2564  C4  ATP N   1      40.125  15.925   2.810  1.00 30.02      N
ATOM   2565  N3  ATP N   1      38.937  15.389   2.431  1.00 27.11      N
ATOM   2566  C2  ATP N   1      38.679  14.085   2.615  1.00 25.62      N
ATOM   2567  N1  ATP N   1      39.597  13.283   3.175  1.00 21.76      N
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ATOM   2568  C6  ATP N   1      40.800  13.768   3.571  1.00 23.90      N
ATOM   2569  N6  ATP N   1      41.698  12.964   4.127  1.00 21.94      N
ATOM   2570  S   SO4 I   1      58.680   8.493  -0.639  1.00 56.05      I
ATOM   2571  O1  SO4 I   1      57.956   7.875   0.483  1.00 58.83      I
ATOM   2572  O2  SO4 I   1      57.886   9.607  -1.188  1.00 57.04      I
ATOM   2573  O3  SO4 I   1      58.906   7.478  -1.683  1.00 57.47      I
ATOM   2574  O4  SO4 I   1      59.976   9.008  -0.156  1.00 57.51      I
ATOM   2575  S   SO4 I   2      39.339   4.855   7.057  1.00 84.24      I
ATOM   2576  O1  SO4 I   2      39.390   6.175   7.711  1.00 85.02      I
ATOM   2577  O2  SO4 I   2      40.101   4.897   5.797  1.00 84.75      I
ATOM   2578  O3  SO4 I   2      37.936   4.506   6.766  1.00 84.94      I
ATOM   2579  O4  SO4 I   2      39.931   3.842   7.954  1.00 84.44      I
ATOM   2580  S   SO4 I   3      38.987  -2.256   3.310  1.00 58.58      I
ATOM   2581  O1  SO4 I   3      37.734  -1.675   3.827  1.00 59.11      I
ATOM   2582  O2  SO4 I   3      39.460  -1.454   2.172  1.00 59.91      I
ATOM   2583  O3  SO4 I   3      38.743  -3.640   2.866  1.00 60.97      I
ATOM   2584  O4  SO4 I   3      40.014  -2.260   4.369  1.00 59.58      I
ATOM   2585  S   SO4 I   4      34.397   5.289  30.981  1.00 64.34      I
ATOM   2586  O1  SO4 I   4      33.627   6.528  30.742  1.00 60.43      I
ATOM   2587  O2  SO4 I   4      34.337   4.427  29.782  1.00 60.11      I
ATOM   2588  O3  SO4 I   4      33.816   4.572  32.133  1.00 64.39      I
ATOM   2589  O4  SO4 I   4      35.806   5.626  31.277  1.00 63.55      I
ATOM   2590  S   SO4 I   5      55.074  -6.984  -3.711  1.00 75.40      I
ATOM   2591  O1  SO4 I   5      54.657  -7.518  -2.399  1.00 74.66      I
ATOM   2592  O2  SO4 I   5      54.209  -5.845  -4.065  1.00 74.96      I
ATOM   2593  O3  SO4 I   5      54.950  -8.034  -4.742  1.00 74.22      I
ATOM   2594  O4  SO4 I   5      56.477  -6.532  -3.633  1.00 75.15      I
ATOM   2595  O2  PO4 P 100      57.362  24.998  13.149  1.00 66.76      P
ATOM   2596  O3  PO4 P 100      59.399  26.166  13.761  1.00 66.89      P
ATOM   2597  O4  PO4 P 100      57.761  25.606  15.462  1.00 67.43      P
ATOM   2598  O1  PO4 P 100      57.264  27.325  13.818  1.00 65.91      P
ATOM   2599  P   PO4 P 100      57.947  26.025  14.048  1.00 66.69      P
END
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Example 4: Co-ordinates for the dimer of the PDK1 fragment, without alternate side chains. Chain A is the molecule for which co-ordinates are given in Examples 2 and 3, and chain B is the symmetry-related molecule.

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ATOM      1  CB  PRO A  71      58.912  -7.251   8.216  1.00 67.78      A
ATOM      2  CG  PRO A  71      59.621  -6.941   9.534  1.00 69.16      A
ATOM      3  C   PRO A  71      59.493  -6.506   5.894  1.00 67.06      A
ATOM      4  O   PRO A  71      59.196  -5.318   5.766  1.00 66.66      A
ATOM      5  N   PRO A  71      60.984  -6.073   7.833  1.00 67.86      A
ATOM      6  CD  PRO A  71      60.554  -5.762   9.207  1.00 68.24      A
ATOM      7  CA  PRO A  71      60.040  -7.035   7.217  1.00 67.75      A
ATOM      8  N   PRO A  72      59.356  -7.385   4.890  1.00 66.32      A
ATOM      9  CD  PRO A  72      59.712  -8.816   4.898  1.00 67.17      A
ATOM     10  CA  PRO A  72      58.840  -6.986   3.578  1.00 65.61      A
ATOM     11  CB  PRO A  72      58.672  -8.321   2.858  1.00 66.47      A
ATOM     12  CG  PRO A  72      59.796  -9.133   3.419  1.00 67.57      A
ATOM     13  C   PRO A  72      57.527  -6.208   3.673  1.00 63.94      A
ATOM     14  O   PRO A  72      56.710  -6.451   4.561  1.00 64.11      A
ATOM     15  N   ALA A  73      57.341  -5.268   2.753  1.00 61.57      A
ATOM     16  CA  ALA A  73      56.133  -4.454   2.708  1.00 58.74      A
ATOM     17  CB  ALA A  73      56.438  -3.030   3.165  1.00 58.05      A
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	ATOM	18	C	ALA	A	73	55.626	-4.448	1.271	1.00	56.78	A
	ATOM	19	O	ALA	A	73	56.347	-4.834	0.349	1.00	56.95	A
	ATOM	20	N	PRO	A	74	54.372	-4.024	1.057	1.00	54.15	A
	ATOM	21	CD	PRO	A	74	53.335	-3.610	2.018	1.00	53.31	A
5	ATOM	22	CA	PRO	A	74	53.856	-4.003	-0.314	1.00	52.54	A
	ATOM	23	CB	PRO	A	74	52.474	-3.375	-0.148	1.00	52.86	A
	ATOM	24	CG	PRO	A	74	52.067	-3.824	1.226	1.00	52.88	A
	ATOM	25	C	PRO	A	74	54.772	-3.167	-1.204	1.00	50.08	A
	ATOM	26	O	PRO	A	74	55.559	-2.361	-0.708	1.00	49.96	A
10	ATOM	27	N	ALA	A	75	54.680	-3.366	-2.514	1.00	47.58	A
	ATOM	28	CA	ALA	A	75	55.503	-2.602	-3.446	1.00	44.69	A
	ATOM	29	CB	ALA	A	75	55.312	-3.121	-4.870	1.00	46.14	A
	ATOM	30	C	ALA	A	75	55.100	-1.134	-3.371	1.00	41.55	A
	ATOM	31	O	ALA	A	75	53.947	-0.813	-3.086	1.00	41.01	A
15	ATOM	32	N	LYS	A	76	56.053	-0.245	-3.619	1.00	38.31	A
	ATOM	33	CA	LYS	A	76	55.781	1.184	-3.588	1.00	35.72	A
	ATOM	34	CB	LYS	A	76	57.053	1.957	-3.930	1.00	37.70	A
	ATOM	35	CG	LYS	A	76	57.123	3.356	-3.350	1.00	40.99	A
	ATOM	36	CD	LYS	A	76	57.262	3.316	-1.836	1.00	40.04	A
20	ATOM	37	CE	LYS	A	76	57.511	4.705	-1.277	1.00	42.08	A
	ATOM	38	NZ	LYS	A	76	57.681	4.695	0.202	1.00	42.99	A
	ATOM	39	C	LYS	A	76	54.708	1.467	-4.638	1.00	32.65	A
	ATOM	40	O	LYS	A	76	54.814	1.005	-5.770	1.00	31.41	A
	ATOM	41	N	LYS	A	77	53.668	2.207	-4.270	1.00	28.59	A
25	ATOM	42	CA	LYS	A	77	52.619	2.517	-5.232	1.00	25.72	A
	ATOM	43	CB	LYS	A	77	51.316	2.865	-4.509	1.00	26.22	A
	ATOM	44	CG	LYS	A	77	50.796	1.731	-3.631	1.00	27.15	A
	ATOM	45	CD	LYS	A	77	49.487	2.089	-2.967	1.00	26.80	A
	ATOM	46	CE	LYS	A	77	49.136	1.091	-1.870	1.00	27.31	A
30	ATOM	47	NZ	LYS	A	77	48.998	-0.296	-2.380	1.00	27.17	A
	ATOM	48	C	LYS	A	77	53.053	3.668	-6.137	1.00	24.67	A
	ATOM	49	O	LYS	A	77	54.010	4.377	-5.829	1.00	21.60	A
	ATOM	50	N	ARG	A	78	52.351	3.838	-7.254	1.00	23.66	A
	ATOM	51	CA	ARG	A	78	52.662	4.897	-8.211	1.00	26.14	A
35	ATOM	52	CB	ARG	A	78	53.574	4.344	-9.318	1.00	28.57	A
	ATOM	53	CG	ARG	A	78	53.017	3.139	-10.050	1.00	34.78	A
	ATOM	54	CD	ARG	A	78	54.092	2.465	-10.896	1.00	40.96	A
	ATOM	55	NE	ARG	A	78	53.560	1.364	-11.700	1.00	48.93	A
	ATOM	56	CZ	ARG	A	78	52.985	0.270	-11.203	1.00	52.58	A
40	ATOM	57	NH1	ARG	A	78	52.860	0.113	-9.889	1.00	54.60	A
	ATOM	58	NH2	ARG	A	78	52.530	-0.672	-12.022	1.00	54.09	A
	ATOM	59	C	ARG	A	78	51.382	5.488	-8.803	1.00	23.76	A
	ATOM	60	O	ARG	A	78	50.311	4.888	-8.706	1.00	24.25	A
	ATOM	61	N	PRO	A	79	51.475	6.676	-9.428	1.00	21.76	A
45	ATOM	62	CD	PRO	A	79	52.691	7.475	-9.668	1.00	20.82	A
	ATOM	63	CA	PRO	A	79	50.301	7.325	-10.021	1.00	21.96	A
	ATOM	64	CB	PRO	A	79	50.910	8.481	-10.816	1.00	22.27	A
	ATOM	65	CG	PRO	A	79	52.124	8.831	-10.014	1.00	22.12	A
	ATOM	66	C	PRO	A	79	49.446	6.413	-10.903	1.00	22.86	A
50	ATOM	67	O	PRO	A	79	48.213	6.461	-10.842	1.00	20.52	A
	ATOM	68	N	GLU	A	80	50.103	5.586	-11.714	1.00	21.87	A
	ATOM	69	CA	GLU	A	80	49.403	4.685	-12.628	1.00	22.99	A
	ATOM	70	CB	GLU	A	80	50.393	3.994	-13.571	1.00	25.24	A
	ATOM	71	CG	GLU	A	80	51.230	2.907	-12.925	1.00	28.75	A
55	ATOM	72	CD	GLU	A	80	52.157	2.224	-13.913	1.00	31.99	A
	ATOM	73	OE1	GLU	A	80	53.072	2.897	-14.433	1.00	34.34	A
	ATOM	74	OE2	GLU	A	80	51.969	1.015	-14.172	1.00	32.83	A
	ATOM	75	C	GLU	A	80	48.556	3.631	-11.912	1.00	22.09	A
	ATOM	76	O	GLU	A	80	47.692	3.013	-12.530	1.00	22.37	A

	ATOM	77	N	ASP	A	81	48.804	3.413	-10.622	1.00	19.97	A
	ATOM	78	CA	ASP	A	81	48.026	2.423	-9.874	1.00	19.93	A
	ATOM	79	CB	ASP	A	81	48.736	2.029	-8.571	1.00	21.19	A
	ATOM	80	CG	ASP	A	81	50.089	1.380	-8.807	1.00	22.46	A
5	ATOM	81	OD1	ASP	A	81	50.195	0.554	-9.731	1.00	24.22	A
	ATOM	82	OD2	ASP	A	81	51.043	1.685	-8.058	1.00	23.33	A
	ATOM	83	C	ASP	A	81	46.652	2.975	-9.518	1.00	20.85	A
	ATOM	84	O	ASP	A	81	45.793	2.246	-9.015	1.00	19.96	A
	ATOM	85	N	PHE	A	82	46.445	4.258	-9.804	1.00	18.91	A
10	ATOM	86	CA	PHE	A	82	45.200	4.934	-9.465	1.00	19.30	A
	ATOM	87	CB	PHE	A	82	45.475	6.027	-8.427	1.00	18.43	A
	ATOM	88	CG	PHE	A	82	46.134	5.531	-7.175	1.00	18.01	A
	ATOM	89	CD1	PHE	A	82	45.371	5.136	-6.084	1.00	17.19	A
	ATOM	90	CD2	PHE	A	82	47.520	5.460	-7.086	1.00	18.99	A
15	ATOM	91	CE1	PHE	A	82	45.977	4.676	-4.918	1.00	17.12	A
	ATOM	92	CE2	PHE	A	82	48.137	5.000	-5.925	1.00	19.64	A
	ATOM	93	CZ	PHE	A	82	47.361	4.607	-4.838	1.00	18.00	A
	ATOM	94	C	PHE	A	82	44.476	5.596	-10.621	1.00	20.81	A
	ATOM	95	O	PHE	A	82	45.066	5.933	-11.649	1.00	20.34	A
20	ATOM	96	N	LYS	A	83	43.182	5.792	-10.411	1.00	19.80	A
	ATOM	97	CA	LYS	A	83	42.321	6.478	-11.353	1.00	21.65	A
	ATOM	98	CB	LYS	A	83	41.096	5.625	-11.687	1.00	22.02	A
	ATOM	99	CG	LYS	A	83	40.062	6.326	-12.550	1.00	28.93	A
	ATOM	100	CD	LYS	A	83	38.974	5.355	-12.981	1.00	34.20	A
25	ATOM	101	CE	LYS	A	83	37.909	6.042	-13.824	1.00	38.10	A
	ATOM	102	NZ	LYS	A	83	37.179	7.086	-13.043	1.00	43.33	A
	ATOM	103	C	LYS	A	83	41.913	7.702	-10.541	1.00	20.74	A
	ATOM	104	O	LYS	A	83	41.084	7.606	-9.635	1.00	20.98	A
	ATOM	105	N	PHE	A	84	42.513	8.848	-10.835	1.00	19.99	A
30	ATOM	106	CA	PHE	A	84	42.188	10.049	-10.083	1.00	18.63	A
	ATOM	107	CB	PHE	A	84	43.279	11.103	-10.258	1.00	18.95	A
	ATOM	108	CG	PHE	A	84	44.571	10.741	-9.587	1.00	17.68	A
	ATOM	109	CD1	PHE	A	84	45.498	9.926	-10.224	1.00	18.16	A
	ATOM	110	CD2	PHE	A	84	44.843	11.183	-8.299	1.00	19.66	A
35	ATOM	111	CE1	PHE	A	84	46.676	9.556	-9.589	1.00	18.09	A
	ATOM	112	CE2	PHE	A	84	46.021	10.816	-7.653	1.00	18.89	A
	ATOM	113	CZ	PHE	A	84	46.936	10.002	-8.301	1.00	17.33	A
	ATOM	114	C	PHE	A	84	40.834	10.617	-10.460	1.00	19.69	A
	ATOM	115	O	PHE	A	84	40.391	10.489	-11.601	1.00	20.72	A
40	ATOM	116	N	GLY	A	85	40.178	11.233	-9.484	1.00	16.80	A
	ATOM	117	CA	GLY	A	85	38.872	11.810	-9.716	1.00	17.73	A
	ATOM	118	C	GLY	A	85	38.819	13.280	-9.346	1.00	18.75	A
	ATOM	119	O	GLY	A	85	39.740	14.043	-9.650	1.00	18.45	A
	ATOM	120	N	LYS	A	86	37.753	13.673	-8.659	1.00	16.00	A
45	ATOM	121	CA	LYS	A	86	37.571	15.064	-8.278	1.00	18.26	A
	ATOM	122	CB	LYS	A	86	36.133	15.302	-7.812	1.00	19.00	A
	ATOM	123	CG	LYS	A	86	35.793	14.660	-6.481	1.00	21.55	A
	ATOM	124	CD	LYS	A	86	34.368	14.981	-6.066	1.00	26.48	A
	ATOM	125	CE	LYS	A	86	33.994	14.239	-4.793	1.00	31.92	A
50	ATOM	126	NZ	LYS	A	86	32.568	14.457	-4.412	1.00	35.36	A
	ATOM	127	C	LYS	A	86	38.523	15.571	-7.202	1.00	18.57	A
	ATOM	128	O	LYS	A	86	39.045	14.807	-6.385	1.00	16.77	A
	ATOM	129	N	ILE	A	87	38.737	16.881	-7.227	1.00	17.88	A
	ATOM	130	CA	ILE	A	87	39.577	17.554	-6.256	1.00	18.26	A
55	ATOM	131	CB	ILE	A	87	39.994	18.952	-6.772	1.00	19.60	A
	ATOM	132	CG2	ILE	A	87	40.593	19.786	-5.628	1.00	18.73	A
	ATOM	133	CG1	ILE	A	87	40.968	18.786	-7.945	1.00	21.16	A
	ATOM	134	CD1	ILE	A	87	41.412	20.087	-8.588	1.00	25.26	A
	ATOM	135	C	ILE	A	87	38.731	17.709	-4.997	1.00	19.67	A

	ATOM	136	O	ILE	A	87	37.628	18.249	-5.052	1.00	20.41	A
	ATOM	137	N	LEU	A	88	39.240	17.229	-3.867	1.00	19.15	A
	ATOM	138	CA	LEU	A	88	38.508	17.324	-2.611	1.00	20.68	A
	ATOM	139	CB	LEU	A	88	38.870	16.151	-1.700	1.00	19.97	A
5	ATOM	140	CG	LEU	A	88	38.529	14.759	-2.237	1.00	19.24	A
	ATOM	141	CD1	LEU	A	88	39.090	13.692	-1.311	1.00	21.41	A
	ATOM	142	CD2	LEU	A	88	37.029	14.622	-2.359	1.00	18.84	A
	ATOM	143	C	LEU	A	88	38.815	18.632	-1.901	1.00	23.11	A
	ATOM	144	O	LEU	A	88	37.999	19.146	-1.139	1.00	25.10	A
10	ATOM	145	N	GLY	A	89	39.997	19.174	-2.149	1.00	24.09	A
	ATOM	146	CA	GLY	A	89	40.367	20.418	-1.507	1.00	24.27	A
	ATOM	147	C	GLY	A	89	41.658	20.954	-2.078	1.00	25.47	A
	ATOM	148	O	GLY	A	89	42.445	20.202	-2.666	1.00	22.19	A
	ATOM	149	N	GLU	A	90	41.870	22.254	-1.906	1.00	26.22	A
15	ATOM	150	CA	GLU	A	90	43.064	22.924	-2.404	1.00	29.96	A
	ATOM	151	CB	GLU	A	90	42.698	23.814	-3.596	1.00	30.75	A
	ATOM	152	CG	GLU	A	90	42.267	23.038	-4.831	1.00	34.32	A
	ATOM	153	CD	GLU	A	90	41.711	23.930	-5.927	1.00	38.27	A
	ATOM	154	OE1	GLU	A	90	40.590	24.456	-5.764	1.00	40.57	A
20	ATOM	155	OE2	GLU	A	90	42.398	24.110	-6.952	1.00	40.90	A
	ATOM	156	C	GLU	A	90	43.711	23.768	-1.313	1.00	30.68	A
	ATOM	157	O	GLU	A	90	43.049	24.574	-0.668	1.00	32.83	A
	ATOM	158	N	GLY	A	91	45.006	23.566	-1.104	1.00	29.66	A
	ATOM	159	CA	GLY	A	91	45.724	24.332	-0.104	1.00	29.40	A
25	ATOM	160	C	GLY	A	91	46.795	25.151	-0.798	1.00	29.98	A
	ATOM	161	O	GLY	A	91	46.894	25.130	-2.028	1.00	28.16	A
	ATOM	162	N	SER	A	92	47.605	25.870	-0.029	1.00	28.30	A
	ATOM	163	CA	SER	A	92	48.653	26.681	-0.633	1.00	30.50	A
	ATOM	164	CB	SER	A	92	49.165	27.717	0.370	1.00	32.43	A
30	ATOM	165	OG	SER	A	92	49.520	27.099	1.593	1.00	40.94	A
	ATOM	166	C	SER	A	92	49.815	25.843	-1.164	1.00	29.77	A
	ATOM	167	O	SER	A	92	50.456	26.221	-2.143	1.00	30.46	A
	ATOM	168	N	PHE	A	93	50.087	24.703	-0.536	1.00	27.65	A
	ATOM	169	CA	PHE	A	93	51.185	23.855	-0.995	1.00	26.34	A
35	ATOM	170	CB	PHE	A	93	52.281	23.785	0.068	1.00	27.95	A
	ATOM	171	CG	PHE	A	93	52.861	25.117	0.406	1.00	31.06	A
	ATOM	172	CD1	PHE	A	93	52.283	25.909	1.392	1.00	29.96	A
	ATOM	173	CD2	PHE	A	93	53.949	25.613	-0.308	1.00	31.38	A
	ATOM	174	CE1	PHE	A	93	52.779	27.181	1.665	1.00	32.69	A
40	ATOM	175	CE2	PHE	A	93	54.452	26.883	-0.044	1.00	32.63	A
	ATOM	176	CZ	PHE	A	93	53.864	27.670	0.945	1.00	31.81	A
	ATOM	177	C	PHE	A	93	50.759	22.445	-1.365	1.00	25.39	A
	ATOM	178	O	PHE	A	93	51.601	21.559	-1.522	1.00	24.59	A
	ATOM	179	N	SER	A	94	49.457	22.235	-1.519	1.00	23.63	A
45	ATOM	180	CA	SER	A	94	48.965	20.912	-1.860	1.00	21.43	A
	ATOM	181	CB	SER	A	94	49.017	20.013	-0.628	1.00	21.42	A
	ATOM	182	OG	SER	A	94	48.091	20.475	0.340	1.00	21.19	A
	ATOM	183	C	SER	A	94	47.539	20.925	-2.378	1.00	19.82	A
	ATOM	184	O	SER	A	94	46.795	21.882	-2.173	1.00	18.76	A
50	ATOM	185	N	THR	A	95	47.174	19.832	-3.038	1.00	19.38	A
	ATOM	186	CA	THR	A	95	45.840	19.637	-3.580	1.00	17.98	A
	ATOM	187	CB	THR	A	95	45.818	19.818	-5.110	1.00	19.25	A
	ATOM	188	OG1	THR	A	95	46.196	21.162	-5.434	1.00	22.04	A
	ATOM	189	CG2	THR	A	95	44.421	19.549	-5.661	1.00	17.61	A
55	ATOM	190	C	THR	A	95	45.455	18.201	-3.243	1.00	18.61	A
	ATOM	191	O	THR	A	95	46.212	17.264	-3.524	1.00	17.10	A
	ATOM	192	N	VAL	A	96	44.295	18.024	-2.623	1.00	16.53	A
	ATOM	193	CA	VAL	A	96	43.845	16.685	-2.266	1.00	16.05	A
	ATOM	194	CB	VAL	A	96	43.170	16.672	-0.886	1.00	16.32	A

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ATOM    195  CG1 VAL A  96      42.741  15.249  -0.532  1.00 18.02      A
ATOM    196  CG2 VAL A  96      44.145  17.206   0.168  1.00 16.69      A
ATOM    197  C   VAL A  96      42.875  16.207  -3.335  1.00 16.42      A
ATOM    198  O   VAL A  96      41.906  16.892  -3.665  1.00 16.47      A
ATOM    199  N   VAL A  97      43.157  15.033  -3.888  1.00 16.80      A
ATOM    200  CA  VAL A  97      42.338  14.471  -4.949  1.00 16.72      A
ATOM    201  CB  VAL A  97      43.153  14.354  -6.255  1.00 18.43      A
ATOM    202  CG1 VAL A  97      42.249  13.927  -7.404  1.00 19.69      A
ATOM    203  CG2 VAL A  97      43.831  15.685  -6.569  1.00 17.84      A
ATOM    204  C   VAL A  97      41.812  13.091  -4.583  1.00 16.77      A
ATOM    205  O   VAL A  97      42.532  12.270  -4.014  1.00 17.13      A
ATOM    206  N   LEU A  98      40.545  12.845  -4.895  1.00 16.62      A
ATOM    207  CA  LEU A  98      39.947  11.548  -4.624  1.00 17.04      A
ATOM    208  CB  LEU A  98      38.424  11.633  -4.743  1.00 16.89      A
ATOM    209  CG  LEU A  98      37.635  10.342  -4.508  1.00 19.46      A
ATOM    210  CD1 LEU A  98      37.990   9.762  -3.146  1.00 20.07      A
ATOM    211  CD2 LEU A  98      36.143  10.627  -4.588  1.00 17.93      A
ATOM    212  C   LEU A  98      40.512  10.597  -5.677  1.00 17.38      A
ATOM    213  O   LEU A  98      40.527  10.920  -6.863  1.00 18.60      A
ATOM    214  N   ALA A  99      40.995   9.438  -5.246  1.00 17.13      A
ATOM    215  CA  ALA A  99      41.570   8.466  -6.168  1.00 18.42      A
ATOM    216  CB  ALA A  99      43.090   8.524  -6.105  1.00 14.76      A
ATOM    217  C   ALA A  99      41.102   7.055  -5.848  1.00 21.40      A
ATOM    218  O   ALA A  99      40.941   6.691  -4.679  1.00 22.52      A
ATOM    219  N   ARG A 100      40.878   6.261  -6.888  1.00 19.77      A
ATOM    220  CA  ARG A 100      40.459   4.884  -6.693  1.00 20.85      A
ATOM    221  CB  ARG A 100      39.202   4.585  -7.518  1.00 24.22      A
ATOM    222  CG  ARG A 100      38.608   3.205  -7.256  1.00 31.78      A
ATOM    223  CD  ARG A 100      37.326   2.979  -8.048  1.00 36.24      A
ATOM    224  NE  ARG A 100      36.213   3.818  -7.594  1.00 41.40      A
ATOM    225  CZ  ARG A 100      35.566   3.662  -6.439  1.00 42.05      A
ATOM    226  NH1 ARG A 100      35.912   2.696  -5.598  1.00 40.67      A
ATOM    227  NH2 ARG A 100      34.559   4.468  -6.128  1.00 43.65      A
ATOM    228  C   ARG A 100      41.613   3.985  -7.129  1.00 18.63      A
ATOM    229  O   ARG A 100      42.078   4.065  -8.271  1.00 19.49      A
ATOM    230  N   GLU A 101      42.102   3.157  -6.212  1.00 16.43      A
ATOM    231  CA  GLU A 101      43.196   2.246  -6.533  1.00 16.11      A
ATOM    232  CB  GLU A 101      43.774   1.637  -5.248  1.00 16.79      A
ATOM    233  CG  GLU A 101      44.917   0.657  -5.488  1.00 16.51      A
ATOM    234  CD  GLU A 101      45.501   0.115  -4.200  1.00 18.20      A
ATOM    235  OE1 GLU A 101      44.733  -0.081  -3.239  1.00 18.32      A
ATOM    236  OE2 GLU A 101      46.725  -0.132  -4.150  1.00 17.14      A
ATOM    237  C   GLU A 101      42.625   1.152  -7.442  1.00 17.92      A
ATOM    238  O   GLU A 101      41.681   0.462  -7.069  1.00 18.02      A
ATOM    239  N   LEU A 102      43.198   1.002  -8.632  1.00 19.06      A
ATOM    240  CA  LEU A 102      42.718   0.025  -9.607  1.00 20.71      A
ATOM    241  CB  LEU A 102      43.569   0.097 -10.878  1.00 23.42      A
ATOM    242  CG  LEU A 102      43.531   1.426 -11.642  1.00 25.30      A
ATOM    243  CD1 LEU A 102      44.577   1.414 -12.748  1.00 27.88      A
ATOM    244  CD2 LEU A 102      42.140   1.647 -12.214  1.00 26.79      A
ATOM    245  C   LEU A 102      42.671  -1.418  -9.125  1.00 21.62      A
ATOM    246  O   LEU A 102      41.668  -2.103  -9.305  1.00 21.09      A
ATOM    247  N   ALA A 103      43.753  -1.874  -8.507  1.00 19.38      A
ATOM    248  CA  ALA A 103      43.836  -3.249  -8.035  1.00 20.87      A
ATOM    249  CB  ALA A 103      45.284  -3.571  -7.671  1.00 19.23      A
ATOM    250  C   ALA A 103      42.919  -3.629  -6.872  1.00 19.92      A
ATOM    251  O   ALA A 103      42.703  -4.815  -6.628  1.00 20.38      A
ATOM    252  N   THR A 104      42.361  -2.643  -6.175  1.00 18.12      A
ATOM    253  CA  THR A 104      41.517  -2.927  -5.018  1.00 17.15      A
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ATOM    254  CB  THR A 104      42.212  -2.484  -3.717  1.00 19.54      A
ATOM    255  OG1 THR A 104      42.456  -1.070  -3.773  1.00 19.26      A
ATOM    256  CG2 THR A 104      43.536  -3.219  -3.529  1.00 17.02      A
ATOM    257  C   THR A 104      40.159  -2.247  -5.026  1.00 19.44      A
ATOM    258  O   THR A 104      39.259  -2.648  -4.285  1.00 18.70      A
ATOM    259  N   SER A 105      40.034  -1.207  -5.847  1.00 19.65      A
ATOM    260  CA  SER A 105      38.819  -0.400  -5.967  1.00 19.37      A
ATOM    261  CB  SER A 105      37.598  -1.304  -6.173  1.00 21.81      A
ATOM    262  OG  SER A 105      36.431  -0.539  -6.412  1.00 23.01      A
ATOM    263  C   SER A 105      38.644   0.447  -4.701  1.00 18.99      A
ATOM    264  O   SER A 105      37.602   1.070  -4.488  1.00 18.66      A
ATOM    265  N   ARG A 106      39.674   0.468  -3.861  1.00 16.84      A
ATOM    266  CA  ARG A 106      39.655   1.267  -2.634  1.00 16.21      A
ATOM    267  CB  ARG A 106      40.827   0.886  -1.723  1.00 16.41      A
ATOM    268  CG  ARG A 106      40.619  -0.367  -0.906  1.00 15.49      A
ATOM    269  CD  ARG A 106      41.887  -0.755  -0.170  1.00 17.43      A
ATOM    270  NE  ARG A 106      41.620  -1.792   0.824  1.00 20.47      A
ATOM    271  CZ  ARG A 106      42.548  -2.568   1.371  1.00 20.24      A
ATOM    272  NH1 ARG A 106      43.821  -2.433   1.017  1.00 17.80      A
ATOM    273  NH2 ARG A 106      42.198  -3.468   2.285  1.00 20.14      A
ATOM    274  C   ARG A 106      39.785   2.746  -2.981  1.00 17.37      A
ATOM    275  O   ARG A 106      40.514   3.103  -3.902  1.00 17.75      A
ATOM    276  N   GLU A 107      39.085   3.599  -2.240  1.00 16.06      A
ATOM    277  CA  GLU A 107      39.156   5.039  -2.461  1.00 20.80      A
ATOM    278  CB  GLU A 107      37.779   5.694  -2.337  1.00 22.93      A
ATOM    279  CG  GLU A 107      36.711   5.171  -3.269  1.00 30.87      A
ATOM    280  CD  GLU A 107      35.431   5.975  -3.148  1.00 32.40      A
ATOM    281  OE1 GLU A 107      35.262   6.939  -3.923  1.00 33.74      A
ATOM    282  OE2 GLU A 107      34.608   5.654  -2.263  1.00 36.00      A
ATOM    283  C   GLU A 107      40.053   5.678  -1.410  1.00 18.93      A
ATOM    284  O   GLU A 107      39.891   5.427  -0.220  1.00 19.21      A
ATOM    285  N   TYR A 108      40.988   6.507  -1.852  1.00 16.70      A
ATOM    286  CA  TYR A 108      41.883   7.209  -0.942  1.00 15.86      A
ATOM    287  CB  TYR A 108      43.325   6.728  -1.104  1.00 15.30      A
ATOM    288  CG  TYR A 108      43.593   5.328  -0.612  1.00 16.33      A
ATOM    289  CD1 TYR A 108      43.765   5.066   0.746  1.00 16.36      A
ATOM    290  CE1 TYR A 108      44.046   3.769   1.201  1.00 18.48      A
ATOM    291  CD2 TYR A 108      43.701   4.268  -1.511  1.00 13.25      A
ATOM    292  CE2 TYR A 108      43.980   2.981  -1.075  1.00 17.28      A
ATOM    293  CZ  TYR A 108      44.152   2.736   0.276  1.00 19.17      A
ATOM    294  OH  TYR A 108      44.440   1.461   0.688  1.00 19.38      A
ATOM    295  C   TYR A 108      41.850   8.687  -1.292  1.00 16.80      A
ATOM    296  O   TYR A 108      41.560   9.058  -2.431  1.00 15.22      A
ATOM    297  N   ALA A 109      42.132   9.528  -0.306  1.00 14.61      A
ATOM    298  CA  ALA A 109      42.207  10.957  -0.539  1.00 14.30      A
ATOM    299  CB  ALA A 109      41.671  11.726   0.661  1.00 14.78      A
ATOM    300  C   ALA A 109      43.713  11.136  -0.667  1.00 16.79      A
ATOM    301  O   ALA A 109      44.450  10.983   0.317  1.00 16.52      A
ATOM    302  N   ILE A 110      44.182  11.410  -1.881  1.00 14.80      A
ATOM    303  CA  ILE A 110      45.609  11.574  -2.093  1.00 15.80      A
ATOM    304  CB  ILE A 110      46.065  10.863  -3.396  1.00 16.85      A
ATOM    305  CG2 ILE A 110      47.550  11.098  -3.632  1.00 16.80      A
ATOM    306  CG1 ILE A 110      45.774   9.358  -3.284  1.00 17.76      A
ATOM    307  CD1 ILE A 110      46.308   8.513  -4.437  1.00 16.07      A
ATOM    308  C   ILE A 110      46.004  13.045  -2.129  1.00 17.78      A
ATOM    309  O   ILE A 110      45.534  13.813  -2.976  1.00 16.24      A
ATOM    310  N   LYS A 111      46.846  13.435  -1.177  1.00 16.15      A
ATOM    311  CA  LYS A 111      47.326  14.808  -1.100  1.00 17.20      A
ATOM    312  CB  LYS A 111      47.700  15.176   0.344  1.00 17.41      A
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	ATOM	313	CG	LYS	A	111	48.350	16.547	0.464	1.00	20.71	A
	ATOM	314	CD	LYS	A	111	48.585	16.971	1.910	1.00	24.25	A
	ATOM	315	CE	LYS	A	111	47.288	17.381	2.598	1.00	29.46	A
	ATOM	316	NZ	LYS	A	111	47.516	17.866	4.000	1.00	30.50	A
5	ATOM	317	C	LYS	A	111	48.551	14.890	-1.994	1.00	16.41	A
	ATOM	318	O	LYS	A	111	49.509	14.137	-1.813	1.00	18.20	A
	ATOM	319	N	ILE	A	112	48.509	15.798	-2.963	1.00	15.87	A
	ATOM	320	CA	ILE	A	112	49.606	15.967	-3.907	1.00	17.28	A
	ATOM	321	CB	ILE	A	112	49.079	15.911	-5.358	1.00	16.43	A
10	ATOM	322	CG2	ILE	A	112	50.235	15.998	-6.341	1.00	15.12	A
	ATOM	323	CG1	ILE	A	112	48.293	14.609	-5.565	1.00	16.82	A
	ATOM	324	CD1	ILE	A	112	47.580	14.511	-6.904	1.00	18.47	A
	ATOM	325	C	ILE	A	112	50.307	17.301	-3.663	1.00	19.03	A
	ATOM	326	O	ILE	A	112	49.669	18.350	-3.635	1.00	19.15	A
15	ATOM	327	N	LEU	A	113	51.622	17.245	-3.472	1.00	20.22	A
	ATOM	328	CA	LEU	A	113	52.416	18.442	-3.214	1.00	22.36	A
	ATOM	329	CB	LEU	A	113	52.995	18.397	-1.794	1.00	22.13	A
	ATOM	330	CG	LEU	A	113	52.042	18.063	-0.646	1.00	22.46	A
	ATOM	331	CD1	LEU	A	113	51.866	16.557	-0.553	1.00	23.81	A
20	ATOM	332	CD2	LEU	A	113	52.603	18.595	0.660	1.00	23.68	A
	ATOM	333	C	LEU	A	113	53.560	18.547	-4.215	1.00	23.37	A
	ATOM	334	O	LEU	A	113	54.300	17.586	-4.424	1.00	23.11	A
	ATOM	335	N	GLU	A	114	53.706	19.714	-4.834	1.00	23.88	A
	ATOM	336	CA	GLU	A	114	54.771	19.920	-5.806	1.00	26.00	A
25	ATOM	337	CB	GLU	A	114	54.435	21.111	-6.706	1.00	27.74	A
	ATOM	338	CG	GLU	A	114	55.533	21.452	-7.696	1.00	35.07	A
	ATOM	339	CD	GLU	A	114	55.220	22.696	-8.497	1.00	39.24	A
	ATOM	340	OE1	GLU	A	114	54.808	23.703	-7.885	1.00	41.45	A
	ATOM	341	OE2	GLU	A	114	55.395	22.670	-9.736	1.00	44.05	A
30	ATOM	342	C	GLU	A	114	56.087	20.163	-5.067	1.00	24.37	A
	ATOM	343	O	GLU	A	114	56.186	21.071	-4.238	1.00	24.43	A
	ATOM	344	N	LYS	A	115	57.096	19.350	-5.360	1.00	24.10	A
	ATOM	345	CA	LYS	A	115	58.376	19.493	-4.678	1.00	24.93	A
	ATOM	346	CB	LYS	A	115	59.339	18.373	-5.103	1.00	23.72	A
35	ATOM	347	CG	LYS	A	115	59.139	17.080	-4.308	1.00	23.09	A
	ATOM	348	CD	LYS	A	115	60.064	15.944	-4.743	1.00	21.92	A
	ATOM	349	CE	LYS	A	115	59.691	15.400	-6.117	1.00	22.42	A
	ATOM	350	NZ	LYS	A	115	60.447	14.150	-6.448	1.00	19.71	A
	ATOM	351	C	LYS	A	115	59.031	20.858	-4.868	1.00	26.87	A
40	ATOM	352	O	LYS	A	115	59.492	21.469	-3.903	1.00	26.17	A
	ATOM	353	N	ARG	A	116	59.058	21.348	-6.102	1.00	28.73	A
	ATOM	354	CA	ARG	A	116	59.678	22.638	-6.380	1.00	29.66	A
	ATOM	355	CB	ARG	A	116	59.533	22.980	-7.868	1.00	31.29	A
	ATOM	356	CG	ARG	A	116	60.047	24.361	-8.267	1.00	33.19	A
45	ATOM	357	CD	ARG	A	116	61.368	24.710	-7.590	1.00	35.13	A
	ATOM	358	NE	ARG	A	116	62.329	23.612	-7.618	1.00	36.42	A
	ATOM	359	CZ	ARG	A	116	63.510	23.648	-7.009	1.00	36.18	A
	ATOM	360	NH1	ARG	A	116	63.871	24.729	-6.332	1.00	36.12	A
	ATOM	361	NH2	ARG	A	116	64.324	22.602	-7.067	1.00	35.77	A
50	ATOM	362	C	ARG	A	116	59.097	23.761	-5.519	1.00	29.70	A
	ATOM	363	O	ARG	A	116	59.843	24.515	-4.889	1.00	29.16	A
	ATOM	364	N	HIS	A	117	57.773	23.862	-5.472	1.00	27.22	A
	ATOM	365	CA	HIS	A	117	57.126	24.903	-4.681	1.00	26.33	A
	ATOM	366	CB	HIS	A	117	55.606	24.835	-4.848	1.00	28.41	A
55	ATOM	367	CG	HIS	A	117	54.881	26.005	-4.258	1.00	31.82	A
	ATOM	368	CD2	HIS	A	117	55.309	27.249	-3.935	1.00	33.19	A
	ATOM	369	ND1	HIS	A	117	53.536	25.974	-3.961	1.00	34.30	A
	ATOM	370	CE1	HIS	A	117	53.165	27.148	-3.480	1.00	34.58	A
	ATOM	371	NE2	HIS	A	117	54.222	27.940	-3.455	1.00	35.18	A

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ATOM    372  C   HIS A 117      57.477  24.780  -3.202  1.00 26.22      A
ATOM    373  O   HIS A 117      57.737  25.776  -2.534  1.00 25.67      A
ATOM    374  N   ILE A 118      57.469  23.554  -2.689  1.00 24.94      A
ATOM    375  CA  ILE A 118      57.792  23.315  -1.285  1.00 23.94      A
ATOM    376  CB  ILE A 118      57.711  21.812  -0.952  1.00 23.50      A
ATOM    377  CG2 ILE A 118      58.374  21.533   0.389  1.00 23.76      A
ATOM    378  CG1 ILE A 118      56.246  21.362  -0.959  1.00 24.42      A
ATOM    379  CD1 ILE A 118      56.066  19.858  -0.834  1.00 28.06      A
ATOM    380  C   ILE A 118      59.195  23.821  -0.958  1.00 23.78      A
ATOM    381  O   ILE A 118      59.402  24.495   0.048  1.00 23.49      A
ATOM    382  N   ILE A 119      60.153  23.489  -1.815  1.00 23.46      A
ATOM    383  CA  ILE A 119      61.534  23.913  -1.619  1.00 25.13      A
ATOM    384  CB  ILE A 119      62.467  23.250  -2.664  1.00 24.25      A
ATOM    385  CG2 ILE A 119      63.858  23.890  -2.617  1.00 22.47      A
ATOM    386  CG1 ILE A 119      62.540  21.738  -2.395  1.00 25.05      A
ATOM    387  CD1 ILE A 119      63.327  20.945  -3.439  1.00 24.62      A
ATOM    388  C   ILE A 119      61.667  25.435  -1.705  1.00 25.96      A
ATOM    389  O   ILE A 119      62.330  26.051  -0.872  1.00 24.78      A
ATOM    390  N   LYS A 120      61.028  26.039  -2.704  1.00 27.67      A
ATOM    391  CA  LYS A 120      61.100  27.489  -2.879  1.00 30.29      A
ATOM    392  CB  LYS A 120      60.242  27.940  -4.060  1.00 32.34      A
ATOM    393  CG  LYS A 120      60.674  27.407  -5.409  1.00 39.30      A
ATOM    394  CD  LYS A 120      59.765  27.950  -6.512  1.00 45.19      A
ATOM    395  CE  LYS A 120      58.294  27.636  -6.218  1.00 46.48      A
ATOM    396  NZ  LYS A 120      57.363  28.155  -7.252  1.00 46.49      A
ATOM    397  C   LYS A 120      60.647  28.247  -1.638  1.00 30.89      A
ATOM    398  O   LYS A 120      61.303  29.198  -1.217  1.00 32.48      A
ATOM    399  N   GLU A 121      59.527  27.825  -1.055  1.00 29.82      A
ATOM    400  CA  GLU A 121      58.986  28.488   0.128  1.00 30.33      A
ATOM    401  CB  GLU A 121      57.455  28.416   0.117  1.00 33.04      A
ATOM    402  CG  GLU A 121      56.794  29.021  -1.120  1.00 36.45      A
ATOM    403  CD  GLU A 121      57.221  30.456  -1.373  1.00 39.88      A
ATOM    404  OE1 GLU A 121      57.200  31.264  -0.420  1.00 40.53      A
ATOM    405  OE2 GLU A 121      57.573  30.778  -2.529  1.00 43.24      A
ATOM    406  C   GLU A 121      59.511  27.930   1.451  1.00 30.37      A
ATOM    407  O   GLU A 121      58.946  28.204   2.513  1.00 31.24      A
ATOM    408  N   ASN A 122      60.588  27.151   1.390  1.00 29.03      A
ATOM    409  CA  ASN A 122      61.183  26.573   2.594  1.00 28.46      A
ATOM    410  CB  ASN A 122      61.836  27.673   3.436  1.00 31.28      A
ATOM    411  CG  ASN A 122      62.945  28.395   2.698  1.00 34.12      A
ATOM    412  OD1 ASN A 122      62.697  29.143   1.754  1.00 35.57      A
ATOM    413  ND2 ASN A 122      64.181  28.169   3.127  1.00 35.73      A
ATOM    414  C   ASN A 122      60.157  25.835   3.456  1.00 26.89      A
ATOM    415  O   ASN A 122      60.085  26.055   4.663  1.00 27.23      A
ATOM    416  N   LYS A 123      59.375  24.955   2.842  1.00 23.99      A
ATOM    417  CA  LYS A 123      58.358  24.210   3.574  1.00 22.43      A
ATOM    418  CB  LYS A 123      57.031  24.248   2.810  1.00 21.97      A
ATOM    419  CG  LYS A 123      56.475  25.645   2.599  1.00 25.68      A
ATOM    420  CD  LYS A 123      56.253  26.354   3.927  1.00 27.54      A
ATOM    421  CE  LYS A 123      55.822  27.796   3.716  1.00 31.30      A
ATOM    422  NZ  LYS A 123      55.756  28.540   5.004  1.00 33.21      A
ATOM    423  C   LYS A 123      58.748  22.759   3.821  1.00 22.20      A
ATOM    424  O   LYS A 123      57.924  21.960   4.264  1.00 22.50      A
ATOM    425  N   VAL A 124      59.997  22.412   3.535  1.00 20.59      A
ATOM    426  CA  VAL A 124      60.439  21.039   3.730  1.00 20.25      A
ATOM    427  CB  VAL A 124      61.922  20.850   3.328  1.00 19.43      A
ATOM    428  CG1 VAL A 124      62.346  19.407   3.573  1.00 18.69      A
ATOM    429  CG2 VAL A 124      62.104  21.195   1.853  1.00 18.21      A
ATOM    430  C   VAL A 124      60.236  20.561   5.163  1.00 19.53      A
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	ATOM	431	O	VAL	A	124	59.841	19.418	5.385	1.00	20.02	A
	ATOM	432	N	PRO	A	125	60.513	21.422	6.159	1.00	20.01	A
	ATOM	433	CD	PRO	A	125	61.178	22.738	6.118	1.00	18.69	A
	ATOM	434	CA	PRO	A	125	60.318	20.979	7.544	1.00	19.88	A
5	ATOM	435	CB	PRO	A	125	60.793	22.180	8.363	1.00	19.95	A
	ATOM	436	CG	PRO	A	125	61.839	22.805	7.479	1.00	18.85	A
	ATOM	437	C	PRO	A	125	58.848	20.642	7.824	1.00	19.76	A
	ATOM	438	O	PRO	A	125	58.544	19.700	8.550	1.00	16.99	A
	ATOM	439	N	TYR	A	126	57.947	21.418	7.235	1.00	18.98	A
10	ATOM	440	CA	TYR	A	126	56.516	21.220	7.435	1.00	21.97	A
	ATOM	441	CB	TYR	A	126	55.752	22.448	6.933	1.00	25.17	A
	ATOM	442	CG	TYR	A	126	56.040	23.690	7.748	1.00	30.98	A
	ATOM	443	CD1	TYR	A	126	55.438	23.886	8.991	1.00	33.95	A
	ATOM	444	CE1	TYR	A	126	55.721	25.015	9.763	1.00	36.60	A
15	ATOM	445	CD2	TYR	A	126	56.938	24.657	7.292	1.00	35.43	A
	ATOM	446	CE2	TYR	A	126	57.231	25.792	8.058	1.00	37.20	A
	ATOM	447	CZ	TYR	A	126	56.618	25.962	9.291	1.00	37.40	A
	ATOM	448	OH	TYR	A	126	56.903	27.073	10.052	1.00	40.85	A
	ATOM	449	C	TYR	A	126	55.990	19.956	6.762	1.00	21.35	A
20	ATOM	450	O	TYR	A	126	55.265	19.175	7.383	1.00	20.49	A
	ATOM	451	N	VAL	A	127	56.354	19.746	5.501	1.00	18.16	A
	ATOM	452	CA	VAL	A	127	55.892	18.562	4.790	1.00	17.58	A
	ATOM	453	CB	VAL	A	127	56.308	18.596	3.308	1.00	17.45	A
	ATOM	454	CG1	VAL	A	127	55.786	17.350	2.600	1.00	17.97	A
25	ATOM	455	CG2	VAL	A	127	55.751	19.850	2.641	1.00	14.90	A
	ATOM	456	C	VAL	A	127	56.459	17.306	5.448	1.00	18.39	A
	ATOM	457	O	VAL	A	127	55.769	16.298	5.583	1.00	18.14	A
	ATOM	458	N	THR	A	128	57.716	17.381	5.869	1.00	17.50	A
	ATOM	459	CA	THR	A	128	58.375	16.260	6.530	1.00	18.54	A
30	ATOM	460	CB	THR	A	128	59.861	16.586	6.805	1.00	18.01	A
	ATOM	461	OG1	THR	A	128	60.537	16.804	5.559	1.00	21.14	A
	ATOM	462	CG2	THR	A	128	60.536	15.446	7.545	1.00	17.95	A
	ATOM	463	C	THR	A	128	57.676	15.941	7.856	1.00	19.49	A
	ATOM	464	O	THR	A	128	57.438	14.776	8.179	1.00	18.76	A
35	ATOM	465	N	ARG	A	129	57.345	16.981	8.619	1.00	19.60	A
	ATOM	466	CA	ARG	A	129	56.673	16.804	9.904	1.00	20.12	A
	ATOM	467	CB	ARG	A	129	56.534	18.144	10.621	1.00	21.33	A
	ATOM	468	CG	ARG	A	129	55.948	18.029	12.023	1.00	28.02	A
	ATOM	469	CD	ARG	A	129	55.721	19.404	12.597	1.00	31.25	A
40	ATOM	470	NE	ARG	A	129	56.940	20.205	12.560	1.00	37.78	A
	ATOM	471	CZ	ARG	A	129	56.962	21.524	12.391	1.00	40.10	A
	ATOM	472	NH1	ARG	A	129	55.828	22.197	12.239	1.00	40.03	A
	ATOM	473	NH2	ARG	A	129	58.119	22.170	12.374	1.00	44.58	A
	ATOM	474	C	ARG	A	129	55.288	16.186	9.729	1.00	20.08	A
45	ATOM	475	O	ARG	A	129	54.891	15.305	10.496	1.00	20.40	A
	ATOM	476	N	GLU	A	130	54.553	16.654	8.724	1.00	18.79	A
	ATOM	477	CA	GLU	A	130	53.222	16.125	8.454	1.00	20.10	A
	ATOM	478	CB	GLU	A	130	52.638	16.749	7.183	1.00	19.92	A
	ATOM	479	CG	GLU	A	130	51.350	16.087	6.708	1.00	27.85	A
50	ATOM	480	CD	GLU	A	130	50.581	16.933	5.707	1.00	29.72	A
	ATOM	481	OE1	GLU	A	130	51.216	17.528	4.814	1.00	33.46	A
	ATOM	482	OE2	GLU	A	130	49.339	16.996	5.807	1.00	30.74	A
	ATOM	483	C	GLU	A	130	53.301	14.615	8.295	1.00	19.81	A
	ATOM	484	O	GLU	A	130	52.553	13.875	8.935	1.00	18.37	A
55	ATOM	485	N	ARG	A	131	54.219	14.162	7.447	1.00	20.41	A
	ATOM	486	CA	ARG	A	131	54.397	12.735	7.202	1.00	22.45	A
	ATOM	487	CB	ARG	A	131	55.442	12.511	6.098	1.00	25.16	A
	ATOM	488	CG	ARG	A	131	55.742	11.043	5.840	1.00	28.75	A
	ATOM	489	CD	ARG	A	131	56.736	10.837	4.708	1.00	33.75	A

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ATOM    490  NE  ARG A 131      57.020   9.415   4.520  1.00 40.07      A
ATOM    491  CZ  ARG A 131      57.756   8.915   3.532  1.00 43.07      A
ATOM    492  NH1 ARG A 131      58.293   9.721   2.625  1.00 44.91      A
ATOM    493  NH2 ARG A 131      57.955   7.606   3.449  1.00 44.45      A
ATOM    494  C   ARG A 131      54.820  11.982   8.466  1.00 23.24      A
ATOM    495  O   ARG A 131      54.241  10.948   8.804  1.00 23.86      A
ATOM    496  N   ASP A 132      55.831  12.497   9.160  1.00 21.99      A
ATOM    497  CA  ASP A 132      56.318  11.850  10.370  1.00 22.04      A
ATOM    498  CB  ASP A 132      57.570  12.564  10.888  1.00 23.72      A
ATOM    499  CG  ASP A 132      58.750  12.442   9.932  1.00 27.77      A
ATOM    500  OD1 ASP A 132      58.681  11.620   8.989  1.00 27.34      A
ATOM    501  OD2 ASP A 132      59.753  13.163  10.128  1.00 28.70      A
ATOM    502  C   ASP A 132      55.258  11.772  11.474  1.00 21.69      A
ATOM    503  O   ASP A 132      55.077  10.723  12.092  1.00 22.75      A
ATOM    504  N   VAL A 133      54.551  12.868  11.725  1.00 19.54      A
ATOM    505  CA  VAL A 133      53.525  12.843  12.759  1.00 18.52      A
ATOM    506  CB  VAL A 133      52.908  14.244  12.990  1.00 19.26      A
ATOM    507  CG1 VAL A 133      51.708  14.135  13.918  1.00 18.79      A
ATOM    508  CG2 VAL A 133      53.953  15.180  13.604  1.00 18.80      A
ATOM    509  C   VAL A 133      52.419  11.854  12.398  1.00 19.46      A
ATOM    510  O   VAL A 133      52.073  10.991  13.200  1.00 19.94      A
ATOM    511  N   MET A 134      51.878  11.957  11.187  1.00 19.15      A
ATOM    512  CA  MET A 134      50.807  11.052  10.792  1.00 21.25      A
ATOM    513  CB  MET A 134      50.309  11.381   9.383  1.00 17.34      A
ATOM    514  CG  MET A 134      49.615  12.730   9.302  1.00 20.00      A
ATOM    515  SD  MET A 134      48.643  12.952   7.798  1.00 24.21      A
ATOM    516  CE  MET A 134      47.033  12.434   8.400  1.00 23.20      A
ATOM    517  C   MET A 134      51.203   9.582  10.881  1.00 22.43      A
ATOM    518  O   MET A 134      50.384   8.741  11.249  1.00 23.82      A
ATOM    519  N   SER A 135      52.454   9.273  10.556  1.00 23.09      A
ATOM    520  CA  SER A 135      52.939   7.895  10.615  1.00 26.13      A
ATOM    521  CB  SER A 135      54.356   7.798  10.039  1.00 26.17      A
ATOM    522  OG  SER A 135      54.383   8.177   8.673  1.00 31.91      A
ATOM    523  C   SER A 135      52.957   7.358  12.045  1.00 26.58      A
ATOM    524  O   SER A 135      52.926   6.148  12.261  1.00 26.42      A
ATOM    525  N   ARG A 136      53.014   8.261  13.018  1.00 25.65      A
ATOM    526  CA  ARG A 136      53.056   7.870  14.425  1.00 27.47      A
ATOM    527  CB  ARG A 136      53.823   8.914  15.238  1.00 27.97      A
ATOM    528  CG  ARG A 136      55.283   9.082  14.857  1.00 32.00      A
ATOM    529  CD  ARG A 136      55.904  10.218  15.664  1.00 33.03      A
ATOM    530  NE  ARG A 136      55.602  10.073  17.084  1.00 36.11      A
ATOM    531  CZ  ARG A 136      55.867  10.990  18.007  1.00 39.74      A
ATOM    532  NH1 ARG A 136      56.449  12.132  17.661  1.00 40.55      A
ATOM    533  NH2 ARG A 136      55.540  10.769  19.276  1.00 36.72      A
ATOM    534  C   ARG A 136      51.667   7.709  15.036  1.00 26.38      A
ATOM    535  O   ARG A 136      51.516   7.121  16.106  1.00 27.06      A
ATOM    536  N   LEU A 137      50.655   8.235  14.360  1.00 24.77      A
ATOM    537  CA  LEU A 137      49.294   8.162  14.870  1.00 24.70      A
ATOM    538  CB  LEU A 137      48.483   9.363  14.371  1.00 24.52      A
ATOM    539  CG  LEU A 137      49.050  10.760  14.662  1.00 26.67      A
ATOM    540  CD1 LEU A 137      48.075  11.813  14.141  1.00 27.25      A
ATOM    541  CD2 LEU A 137      49.279  10.945  16.155  1.00 27.09      A
ATOM    542  C   LEU A 137      48.592   6.868  14.473  1.00 25.20      A
ATOM    543  O   LEU A 137      48.619   6.469  13.309  1.00 25.99      A
ATOM    544  N   ASP A 138      47.971   6.218  15.451  1.00 21.89      A
ATOM    545  CA  ASP A 138      47.239   4.977  15.219  1.00 21.35      A
ATOM    546  CB  ASP A 138      48.124   3.761  15.523  1.00 22.14      A
ATOM    547  CG  ASP A 138      47.432   2.448  15.201  1.00 24.90      A
ATOM    548  OD1 ASP A 138      46.631   2.423  14.241  1.00 24.78      A
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ATOM    549  OD2 ASP A 138      47.691   1.443  15.897  1.00 25.39      A
ATOM    550  C   ASP A 138      46.031   4.991  16.138  1.00 20.47      A
ATOM    551  O   ASP A 138      45.967   4.248  17.118  1.00 19.06      A
ATOM    552  N   HIS A 139      45.075   5.852  15.810  1.00 18.27      A
ATOM    553  CA  HIS A 139      43.869   6.016  16.606  1.00 18.21      A
ATOM    554  CB  HIS A 139      44.096   7.157  17.612  1.00 15.84      A
ATOM    555  CG  HIS A 139      42.985   7.332  18.600  1.00 15.24      A
ATOM    556  CD2 HIS A 139      42.884   6.964  19.900  1.00 13.97      A
ATOM    557  ND1 HIS A 139      41.791   7.943  18.280  1.00 14.74      A
ATOM    558  CE1 HIS A 139      41.002   7.944  19.341  1.00 14.19      A
ATOM    559  NE2 HIS A 139      41.641   7.356  20.336  1.00 14.15      A
ATOM    560  C   HIS A 139      42.715   6.330  15.654  1.00 18.50      A
ATOM    561  O   HIS A 139      42.879   7.080  14.693  1.00 20.80      A
ATOM    562  N   PRO A 140      41.527   5.767  15.913  1.00 18.32      A
ATOM    563  CD  PRO A 140      41.143   4.984  17.100  1.00 16.71      A
ATOM    564  CA  PRO A 140      40.367   6.001  15.048  1.00 17.43      A
ATOM    565  CB  PRO A 140      39.273   5.157  15.704  1.00 16.64      A
ATOM    566  CG  PRO A 140      39.643   5.204  17.152  1.00 18.43      A
ATOM    567  C   PRO A 140      39.914   7.441  14.803  1.00 18.77      A
ATOM    568  O   PRO A 140      39.207   7.695  13.831  1.00 19.88      A
ATOM    569  N   PHE A 141      40.301   8.381  15.664  1.00 17.14      A
ATOM    570  CA  PHE A 141      39.874   9.767  15.477  1.00 16.42      A
ATOM    571  CB  PHE A 141      39.568  10.422  16.836  1.00 14.60      A
ATOM    572  CG  PHE A 141      38.386   9.817  17.556  1.00 15.26      A
ATOM    573  CD1 PHE A 141      37.335   9.234  16.842  1.00 14.78      A
ATOM    574  CD2 PHE A 141      38.297   9.880  18.942  1.00 13.70      A
ATOM    575  CE1 PHE A 141      36.215   8.727  17.502  1.00 16.94      A
ATOM    576  CE2 PHE A 141      37.178   9.375  19.615  1.00 15.75      A
ATOM    577  CZ  PHE A 141      36.135   8.799  18.893  1.00 16.89      A
ATOM    578  C   PHE A 141      40.857  10.641  14.694  1.00 16.15      A
ATOM    579  O   PHE A 141      40.799  11.871  14.761  1.00 17.35      A
ATOM    580  N   PHE A 142      41.748  10.011  13.941  1.00 15.88      A
ATOM    581  CA  PHE A 142      42.727  10.756  13.154  1.00 17.89      A
ATOM    582  CB  PHE A 142      44.115  10.645  13.793  1.00 17.57      A
ATOM    583  CG  PHE A 142      44.240  11.371  15.103  1.00 18.74      A
ATOM    584  CD1 PHE A 142      44.559  12.726  15.135  1.00 17.77      A
ATOM    585  CD2 PHE A 142      43.997  10.711  16.304  1.00 18.74      A
ATOM    586  CE1 PHE A 142      44.632  13.417  16.347  1.00 15.77      A
ATOM    587  CE2 PHE A 142      44.065  11.393  17.522  1.00 17.56      A
ATOM    588  CZ  PHE A 142      44.383  12.747  17.542  1.00 17.14      A
ATOM    589  C   PHE A 142      42.793  10.231  11.729  1.00 19.12      A
ATOM    590  O   PHE A 142      42.659   9.030  11.504  1.00 20.01      A
ATOM    591  N   VAL A 143      42.978  11.135  10.769  1.00 18.72      A
ATOM    592  CA  VAL A 143      43.102  10.735   9.371  1.00 18.52      A
ATOM    593  CB  VAL A 143      43.294  11.961   8.440  1.00 20.66      A
ATOM    594  CG1 VAL A 143      43.843  11.521   7.080  1.00 21.29      A
ATOM    595  CG2 VAL A 143      41.958  12.673   8.252  1.00 22.97      A
ATOM    596  C   VAL A 143      44.342   9.865   9.330  1.00 18.68      A
ATOM    597  O   VAL A 143      45.355  10.199   9.943  1.00 18.42      A
ATOM    598  N   LYS A 144      44.259   8.745   8.623  1.00 18.30      A
ATOM    599  CA  LYS A 144      45.384   7.824   8.535  1.00 18.78      A
ATOM    600  CB  LYS A 144      44.889   6.373   8.608  1.00 22.27      A
ATOM    601  CG  LYS A 144      46.017   5.340   8.557  1.00 29.72      A
ATOM    602  CD  LYS A 144      45.491   3.912   8.674  1.00 34.16      A
ATOM    603  CE  LYS A 144      46.631   2.896   8.577  1.00 37.67      A
ATOM    604  NZ  LYS A 144      46.138   1.484   8.629  1.00 39.02      A
ATOM    605  C   LYS A 144      46.192   8.002   7.261  1.00 18.53      A
ATOM    606  O   LYS A 144      45.643   8.314   6.200  1.00 18.18      A
ATOM    607  N   LEU A 145      47.502   7.816   7.385  1.00 16.79      A
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	ATOM	608	CA	LEU	A	145	48.411	7.900	6.251	1.00	17.45	A
	ATOM	609	CB	LEU	A	145	49.686	8.653	6.641	1.00	18.82	A
	ATOM	610	CG	LEU	A	145	50.734	8.902	5.549	1.00	20.23	A
	ATOM	611	CD1	LEU	A	145	51.836	9.799	6.093	1.00	18.83	A
5	ATOM	612	CD2	LEU	A	145	51.317	7.581	5.069	1.00	19.79	A
	ATOM	613	C	LEU	A	145	48.739	6.450	5.907	1.00	19.19	A
	ATOM	614	O	LEU	A	145	49.451	5.772	6.659	1.00	17.36	A
	ATOM	615	N	TYR	A	146	48.215	5.972	4.782	1.00	17.28	A
	ATOM	616	CA	TYR	A	146	48.444	4.593	4.358	1.00	17.57	A
10	ATOM	617	CB	TYR	A	146	47.288	4.098	3.486	1.00	17.74	A
	ATOM	618	CG	TYR	A	146	45.981	3.926	4.214	1.00	17.50	A
	ATOM	619	CD1	TYR	A	146	45.099	4.995	4.377	1.00	16.50	A
	ATOM	620	CE1	TYR	A	146	43.881	4.827	5.039	1.00	17.10	A
	ATOM	621	CD2	TYR	A	146	45.620	2.686	4.735	1.00	18.28	A
15	ATOM	622	CE2	TYR	A	146	44.411	2.506	5.399	1.00	19.84	A
	ATOM	623	CZ	TYR	A	146	43.547	3.576	5.544	1.00	17.53	A
	ATOM	624	OH	TYR	A	146	42.342	3.376	6.169	1.00	20.67	A
	ATOM	625	C	TYR	A	146	49.735	4.376	3.582	1.00	18.72	A
	ATOM	626	O	TYR	A	146	50.382	3.338	3.715	1.00	19.51	A
20	ATOM	627	N	PHE	A	147	50.110	5.350	2.765	1.00	18.09	A
	ATOM	628	CA	PHE	A	147	51.307	5.203	1.952	1.00	17.20	A
	ATOM	629	CB	PHE	A	147	51.007	4.258	0.783	1.00	16.77	A
	ATOM	630	CG	PHE	A	147	49.835	4.699	-0.070	1.00	17.75	A
	ATOM	631	CD1	PHE	A	147	49.967	5.752	-0.975	1.00	16.58	A
25	ATOM	632	CD2	PHE	A	147	48.595	4.075	0.053	1.00	18.07	A
	ATOM	633	CE1	PHE	A	147	48.886	6.178	-1.742	1.00	19.62	A
	ATOM	634	CE2	PHE	A	147	47.503	4.492	-0.710	1.00	18.56	A
	ATOM	635	CZ	PHE	A	147	47.647	5.546	-1.610	1.00	19.27	A
	ATOM	636	C	PHE	A	147	51.768	6.533	1.395	1.00	17.13	A
30	ATOM	637	O	PHE	A	147	51.045	7.528	1.452	1.00	14.43	A
	ATOM	638	N	THR	A	148	52.981	6.534	0.854	1.00	17.12	A
	ATOM	639	CA	THR	A	148	53.541	7.718	0.232	1.00	17.96	A
	ATOM	640	CB	THR	A	148	54.449	8.531	1.197	1.00	21.51	A
	ATOM	641	OG1	THR	A	148	55.605	7.760	1.537	1.00	18.83	A
35	ATOM	642	CG2	THR	A	148	53.700	8.897	2.472	1.00	19.60	A
	ATOM	643	C	THR	A	148	54.386	7.262	-0.946	1.00	20.31	A
	ATOM	644	O	THR	A	148	54.860	6.124	-0.991	1.00	18.94	A
	ATOM	645	N	PHE	A	149	54.543	8.149	-1.916	1.00	19.16	A
	ATOM	646	CA	PHE	A	149	55.368	7.877	-3.073	1.00	18.01	A
40	ATOM	647	CB	PHE	A	149	54.748	6.801	-3.989	1.00	17.23	A
	ATOM	648	CG	PHE	A	149	53.389	7.144	-4.544	1.00	16.88	A
	ATOM	649	CD1	PHE	A	149	53.262	7.888	-5.712	1.00	18.58	A
	ATOM	650	CD2	PHE	A	149	52.235	6.668	-3.927	1.00	17.31	A
	ATOM	651	CE1	PHE	A	149	52.007	8.149	-6.267	1.00	19.26	A
45	ATOM	652	CE2	PHE	A	149	50.972	6.923	-4.470	1.00	19.17	A
	ATOM	653	CZ	PHE	A	149	50.858	7.663	-5.642	1.00	19.60	A
	ATOM	654	C	PHE	A	149	55.542	9.205	-3.774	1.00	20.85	A
	ATOM	655	O	PHE	A	149	54.934	10.200	-3.376	1.00	19.76	A
	ATOM	656	N	GLN	A	150	56.398	9.241	-4.782	1.00	19.79	A
50	ATOM	657	CA	GLN	A	150	56.636	10.481	-5.497	1.00	24.03	A
	ATOM	658	CB	GLN	A	150	57.659	11.347	-4.739	1.00	24.45	A
	ATOM	659	CG	GLN	A	150	58.986	10.645	-4.414	1.00	26.28	A
	ATOM	660	CD	GLN	A	150	59.988	11.558	-3.692	1.00	29.02	A
	ATOM	661	OE1	GLN	A	150	60.693	12.353	-4.321	1.00	27.05	A
55	ATOM	662	NE2	GLN	A	150	60.042	11.449	-2.365	1.00	26.47	A
	ATOM	663	C	GLN	A	150	57.160	10.203	-6.885	1.00	23.88	A
	ATOM	664	O	GLN	A	150	57.673	9.118	-7.158	1.00	24.79	A
	ATOM	665	N	ASP	A	151	56.987	11.171	-7.774	1.00	25.88	A
	ATOM	666	CA	ASP	A	151	57.527	11.047	-9.117	1.00	26.49	A

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ATOM    667  CB  ASP A 151      56.437  11.126 -10.199  1.00 24.54      A
ATOM    668  CG  ASP A 151      55.544  12.336 -10.064  1.00 24.95      A
ATOM    669  OD1 ASP A 151      56.005  13.379  -9.561  1.00 22.44      A
ATOM    670  OD2 ASP A 151      54.369  12.242 -10.490  1.00 25.72      A
ATOM    671  C   ASP A 151      58.515  12.203  -9.220  1.00 28.63      A
ATOM    672  O   ASP A 151      58.890  12.780  -8.194  1.00 27.83      A
ATOM    673  N   ASP A 152      58.934  12.560 -10.426  1.00 29.21      A
ATOM    674  CA  ASP A 152      59.907  13.636 -10.562  1.00 31.88      A
ATOM    675  CB  ASP A 152      60.325  13.792 -12.026  1.00 33.94      A
ATOM    676  CG  ASP A 152      61.033  12.564 -12.557  1.00 38.88      A
ATOM    677  OD1 ASP A 152      61.817  11.959 -11.791  1.00 39.67      A
ATOM    678  OD2 ASP A 152      60.817  12.211 -13.738  1.00 41.57      A
ATOM    679  C   ASP A 152      59.487  14.994 -10.013  1.00 30.90      A
ATOM    680  O   ASP A 152      60.316  15.735  -9.482  1.00 31.69      A
ATOM    681  N   GLU A 153      58.207  15.322 -10.107  1.00 29.44      A
ATOM    682  CA  GLU A 153      57.767  16.632  -9.646  1.00 28.69      A
ATOM    683  CB  GLU A 153      56.984  17.327 -10.766  1.00 32.90      A
ATOM    684  CG  GLU A 153      57.451  16.987 -12.183  1.00 40.57      A
ATOM    685  CD  GLU A 153      56.920  15.643 -12.675  1.00 45.78      A
ATOM    686  OE1 GLU A 153      55.682  15.482 -12.760  1.00 48.91      A
ATOM    687  OE2 GLU A 153      57.736  14.747 -12.979  1.00 48.95      A
ATOM    688  C   GLU A 153      56.929  16.683  -8.372  1.00 26.43      A
ATOM    689  O   GLU A 153      56.947  17.688  -7.660  1.00 25.08      A
ATOM    690  N   LYS A 154      56.205  15.610  -8.069  1.00 22.39      A
ATOM    691  CA  LYS A 154      55.318  15.631  -6.912  1.00 21.43      A
ATOM    692  CB  LYS A 154      53.861  15.628  -7.398  1.00 20.33      A
ATOM    693  CG  LYS A 154      53.505  16.716  -8.403  1.00 21.92      A
ATOM    694  CD  LYS A 154      52.211  16.375  -9.146  1.00 19.70      A
ATOM    695  CE  LYS A 154      51.775  17.503 -10.077  1.00 20.04      A
ATOM    696  NZ  LYS A 154      50.631  17.094 -10.951  1.00 19.97      A
ATOM    697  C   LYS A 154      55.458  14.522  -5.881  1.00 20.43      A
ATOM    698  O   LYS A 154      55.949  13.426  -6.173  1.00 21.13      A
ATOM    699  N   LEU A 155      54.985  14.832  -4.676  1.00 19.69      A
ATOM    700  CA  LEU A 155      54.950  13.900  -3.553  1.00 19.10      A
ATOM    701  CB  LEU A 155      55.362  14.588  -2.252  1.00 19.65      A
ATOM    702  CG  LEU A 155      56.740  15.234  -2.129  1.00 21.20      A
ATOM    703  CD1 LEU A 155      56.848  15.918  -0.770  1.00 23.42      A
ATOM    704  CD2 LEU A 155      57.816  14.174  -2.277  1.00 23.08      A
ATOM    705  C   LEU A 155      53.478  13.507  -3.427  1.00 18.87      A
ATOM    706  O   LEU A 155      52.600  14.348  -3.620  1.00 18.61      A
ATOM    707  N   TYR A 156      53.209  12.249  -3.091  1.00 15.02      A
ATOM    708  CA  TYR A 156      51.834  11.783  -2.934  1.00 16.29      A
ATOM    709  CB  TYR A 156      51.470  10.769  -4.029  1.00 14.20      A
ATOM    710  CG  TYR A 156      51.603  11.273  -5.449  1.00 17.29      A
ATOM    711  CD1 TYR A 156      52.857  11.429  -6.045  1.00 16.46      A
ATOM    712  CE1 TYR A 156      52.978  11.884  -7.360  1.00 18.68      A
ATOM    713  CD2 TYR A 156      50.474  11.588  -6.202  1.00 16.43      A
ATOM    714  CE2 TYR A 156      50.583  12.048  -7.512  1.00 16.31      A
ATOM    715  CZ  TYR A 156      51.835  12.192  -8.083  1.00 18.17      A
ATOM    716  OH  TYR A 156      51.941  12.651  -9.371  1.00 17.47      A
ATOM    717  C   TYR A 156      51.657  11.108  -1.572  1.00 16.32      A
ATOM    718  O   TYR A 156      52.412  10.197  -1.235  1.00 16.27      A
ATOM    719  N   PHE A 157      50.678  11.568  -0.792  1.00 15.47      A
ATOM    720  CA  PHE A 157      50.385  10.966   0.508  1.00 16.66      A
ATOM    721  CB  PHE A 157      50.324  12.014   1.629  1.00 16.91      A
ATOM    722  CG  PHE A 157      51.631  12.708   1.907  1.00 18.96      A
ATOM    723  CD1 PHE A 157      52.821  12.261   1.340  1.00 20.31      A
ATOM    724  CD2 PHE A 157      51.664  13.829   2.732  1.00 21.12      A
ATOM    725  CE1 PHE A 157      54.025  12.926   1.585  1.00 22.08      A
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ATOM    726  CE2 PHE A 157      52.865  14.500   2.982  1.00 22.18      A
ATOM    727  CZ  PHE A 157      54.045  14.045   2.405  1.00 21.27      A
ATOM    728  C   PHE A 157      49.016  10.308   0.404  1.00 16.52      A
ATOM    729  O   PHE A 157      48.029  10.979   0.110  1.00 17.32      A
ATOM    730  N   GLY A 158      48.953   9.002   0.644  1.00 15.97      A
ATOM    731  CA  GLY A 158      47.684   8.299   0.572  1.00 16.13      A
ATOM    732  C   GLY A 158      47.000   8.383   1.920  1.00 14.94      A
ATOM    733  O   GLY A 158      47.445   7.756   2.879  1.00 16.28      A
ATOM    734  N   LEU A 159      45.915   9.145   1.989  1.00 13.50      A
ATOM    735  CA  LEU A 159      45.191   9.340   3.241  1.00 15.20      A
ATOM    736  CB  LEU A 159      45.031  10.835   3.517  1.00 14.20      A
ATOM    737  CG  LEU A 159      46.270  11.726   3.385  1.00 19.00      A
ATOM    738  CD1 LEU A 159      45.847  13.188   3.477  1.00 17.12      A
ATOM    739  CD2 LEU A 159      47.275  11.390   4.471  1.00 14.71      A
ATOM    740  C   LEU A 159      43.809   8.716   3.232  1.00 15.53      A
ATOM    741  O   LEU A 159      43.232   8.472   2.177  1.00 16.05      A
ATOM    742  N   SER A 160      43.268   8.469   4.418  1.00 15.86      A
ATOM    743  CA  SER A 160      41.932   7.917   4.498  1.00 19.01      A
ATOM    744  CB  SER A 160      41.566   7.582   5.949  1.00 22.90      A
ATOM    745  OG  SER A 160      41.901   8.629   6.833  1.00 24.18      A
ATOM    746  C   SER A 160      40.987   8.968   3.924  1.00 20.43      A
ATOM    747  O   SER A 160      41.213  10.173   4.062  1.00 19.96      A
ATOM    748  N   TYR A 161      39.945   8.508   3.250  1.00 19.20      A
ATOM    749  CA  TYR A 161      38.975   9.406   2.644  1.00 20.37      A
ATOM    750  CB  TYR A 161      38.471   8.785   1.332  1.00 20.00      A
ATOM    751  CG  TYR A 161      37.314   9.502   0.666  1.00 20.72      A
ATOM    752  CD1 TYR A 161      37.222  10.895   0.682  1.00 18.22      A
ATOM    753  CE1 TYR A 161      36.180  11.557   0.029  1.00 22.24      A
ATOM    754  CD2 TYR A 161      36.333   8.784  -0.020  1.00 20.53      A
ATOM    755  CE2 TYR A 161      35.287   9.436  -0.678  1.00 24.24      A
ATOM    756  CZ  TYR A 161      35.218  10.822  -0.648  1.00 22.32      A
ATOM    757  OH  TYR A 161      34.194  11.471  -1.298  1.00 23.03      A
ATOM    758  C   TYR A 161      37.812   9.681   3.598  1.00 20.14      A
ATOM    759  O   TYR A 161      36.959   8.819   3.810  1.00 19.53      A
ATOM    760  N   ALA A 162      37.791  10.880   4.178  1.00 19.92      A
ATOM    761  CA  ALA A 162      36.721  11.271   5.099  1.00 21.07      A
ATOM    762  CB  ALA A 162      37.187  12.419   6.002  1.00 19.60      A
ATOM    763  C   ALA A 162      35.542  11.712   4.238  1.00 22.07      A
ATOM    764  O   ALA A 162      35.436  12.875   3.860  1.00 20.66      A
ATOM    765  N   LYS A 163      34.653  10.769   3.945  1.00 23.27      A
ATOM    766  CA  LYS A 163      33.503  11.017   3.080  1.00 27.12      A
ATOM    767  CB  LYS A 163      32.663   9.741   2.963  1.00 29.68      A
ATOM    768  CG  LYS A 163      33.455   8.524   2.515  1.00 37.67      A
ATOM    769  CD  LYS A 163      32.556   7.310   2.321  1.00 42.24      A
ATOM    770  CE  LYS A 163      33.373   6.034   2.185  1.00 44.48      A
ATOM    771  NZ  LYS A 163      34.143   5.735   3.430  1.00 44.88      A
ATOM    772  C   LYS A 163      32.581  12.186   3.411  1.00 25.78      A
ATOM    773  O   LYS A 163      32.103  12.863   2.506  1.00 26.53      A
ATOM    774  N   ASN A 164      32.327  12.441   4.689  1.00 24.57      A
ATOM    775  CA  ASN A 164      31.420  13.522   5.033  1.00 23.77      A
ATOM    776  CB  ASN A 164      30.610  13.129   6.265  1.00 25.02      A
ATOM    777  CG  ASN A 164      29.537  12.101   5.932  1.00 27.54      A
ATOM    778  OD1 ASN A 164      28.772  12.281   4.983  1.00 28.79      A
ATOM    779  ND2 ASN A 164      29.475  11.024   6.704  1.00 27.13      A
ATOM    780  C   ASN A 164      31.999  14.931   5.169  1.00 24.43      A
ATOM    781  O   ASN A 164      31.306  15.856   5.589  1.00 23.98      A
ATOM    782  N   GLY A 165      33.262  15.097   4.795  1.00 21.56      A
ATOM    783  CA  GLY A 165      33.873  16.414   4.836  1.00 24.39      A
ATOM    784  C   GLY A 165      34.191  17.043   6.181  1.00 23.62      A
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	ATOM	785	O	GLY	A	165	34.380	16.352	7.177	1.00 23.26	A
	ATOM	786	N	GLU	A	166	34.234	18.373	6.186	1.00 23.22	A
	ATOM	787	CA	GLU	A	166	34.563	19.176	7.362	1.00 24.54	A
	ATOM	788	CB	GLU	A	166	35.055	20.558	6.913	1.00 25.04	A
5	ATOM	789	CG	GLU	A	166	36.419	20.569	6.229	1.00 26.48	A
	ATOM	790	CD	GLU	A	166	36.699	21.889	5.517	1.00 30.02	A
	ATOM	791	OE1	GLU	A	166	36.081	22.906	5.889	1.00 29.33	A
	ATOM	792	OE2	GLU	A	166	37.544	21.916	4.596	1.00 30.48	A
	ATOM	793	C	GLU	A	166	33.436	19.372	8.369	1.00 24.44	A
10	ATOM	794	O	GLU	A	166	32.279	19.541	8.001	1.00 22.76	A
	ATOM	795	N	LEU	A	167	33.791	19.370	9.649	1.00 22.95	A
	ATOM	796	CA	LEU	A	167	32.813	19.581	10.707	1.00 22.26	A
	ATOM	797	CB	LEU	A	167	33.497	19.481	12.073	1.00 22.32	A
	ATOM	798	CG	LEU	A	167	32.706	19.923	13.306	1.00 22.04	A
15	ATOM	799	CD1	LEU	A	167	31.454	19.074	13.463	1.00 19.66	A
	ATOM	800	CD2	LEU	A	167	33.597	19.805	14.537	1.00 21.17	A
	ATOM	801	C	LEU	A	167	32.193	20.971	10.529	1.00 23.49	A
	ATOM	802	O	LEU	A	167	31.047	21.209	10.907	1.00 23.56	A
	ATOM	803	N	LEU	A	168	32.960	21.887	9.948	1.00 24.25	A
20	ATOM	804	CA	LEU	A	168	32.473	23.245	9.722	1.00 26.64	A
	ATOM	805	CB	LEU	A	168	33.560	24.099	9.066	1.00 25.62	A
	ATOM	806	CG	LEU	A	168	33.198	25.546	8.707	1.00 27.34	A
	ATOM	807	CD1	LEU	A	168	32.718	26.296	9.946	1.00 26.42	A
	ATOM	808	CD2	LEU	A	168	34.418	26.238	8.119	1.00 26.74	A
25	ATOM	809	C	LEU	A	168	31.234	23.218	8.829	1.00 27.13	A
	ATOM	810	O	LEU	A	168	30.297	23.989	9.030	1.00 26.01	A
	ATOM	811	N	LYS	A	169	31.233	22.320	7.848	1.00 26.41	A
	ATOM	812	CA	LYS	A	169	30.106	22.210	6.934	1.00 27.70	A
	ATOM	813	CB	LYS	A	169	30.324	21.064	5.945	1.00 30.49	A
30	ATOM	814	CG	LYS	A	169	29.151	20.854	4.993	1.00 32.47	A
	ATOM	815	CD	LYS	A	169	29.407	19.728	3.998	1.00 35.98	A
	ATOM	816	CE	LYS	A	169	29.462	18.372	4.683	1.00 38.53	A
	ATOM	817	NZ	LYS	A	169	29.622	17.263	3.702	1.00 41.00	A
	ATOM	818	C	LYS	A	169	28.801	21.985	7.682	1.00 28.12	A
35	ATOM	819	O	LYS	A	169	27.785	22.608	7.371	1.00 28.08	A
	ATOM	820	N	TYR	A	170	28.826	21.094	8.668	1.00 26.53	A
	ATOM	821	CA	TYR	A	170	27.624	20.791	9.434	1.00 26.95	A
	ATOM	822	CB	TYR	A	170	27.810	19.476	10.193	1.00 25.03	A
	ATOM	823	CG	TYR	A	170	27.898	18.300	9.251	1.00 26.65	A
40	ATOM	824	CD1	TYR	A	170	26.745	17.661	8.790	1.00 28.27	A
	ATOM	825	CE1	TYR	A	170	26.814	16.642	7.839	1.00 26.85	A
	ATOM	826	CD2	TYR	A	170	29.127	17.884	8.742	1.00 27.83	A
	ATOM	827	CE2	TYR	A	170	29.209	16.869	7.792	1.00 27.19	A
	ATOM	828	CZ	TYR	A	170	28.049	16.254	7.343	1.00 30.02	A
45	ATOM	829	OH	TYR	A	170	28.130	15.268	6.382	1.00 29.23	A
	ATOM	830	C	TYR	A	170	27.229	21.918	10.376	1.00 27.59	A
	ATOM	831	O	TYR	A	170	26.045	22.122	10.642	1.00 29.25	A
	ATOM	832	N	ILE	A	171	28.208	22.660	10.882	1.00 28.16	A
	ATOM	833	CA	ILE	A	171	27.883	23.770	11.763	1.00 29.03	A
50	ATOM	834	CB	ILE	A	171	29.151	24.435	12.337	1.00 27.51	A
	ATOM	835	CG2	ILE	A	171	28.773	25.705	13.084	1.00 27.97	A
	ATOM	836	CG1	ILE	A	171	29.872	23.458	13.272	1.00 26.70	A
	ATOM	837	CD1	ILE	A	171	31.163	23.996	13.856	1.00 24.07	A
	ATOM	838	C	ILE	A	171	27.094	24.796	10.944	1.00 31.41	A
55	ATOM	839	O	ILE	A	171	26.088	25.335	11.407	1.00 31.69	A
	ATOM	840	N	ARG	A	172	27.546	25.047	9.719	1.00 33.21	A
	ATOM	841	CA	ARG	A	172	26.874	26.000	8.844	1.00 36.54	A
	ATOM	842	CB	ARG	A	172	27.734	26.314	7.616	1.00 37.73	A
	ATOM	843	CG	ARG	A	172	29.057	27.011	7.912	1.00 41.65	A

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ATOM    844  CD  ARG A 172      29.708  27.492   6.616  1.00 45.29      A
ATOM    845  NE  ARG A 172      31.037  28.070   6.812  1.00 48.51      A
ATOM    846  CZ  ARG A 172      31.314  29.059   7.658  1.00 51.53      A
ATOM    847  NH1 ARG A 172      30.355  29.593   8.406  1.00 53.75      A
ATOM    848  NH2 ARG A 172      32.553  29.526   7.748  1.00 51.21      A
ATOM    849  C   ARG A 172      25.528  25.459   8.378  1.00 37.67      A
ATOM    850  O   ARG A 172      24.550  26.200   8.288  1.00 39.09      A
ATOM    851  N   LYS A 173      25.481  24.163   8.092  1.00 38.44      A
ATOM    852  CA  LYS A 173      24.259  23.528   7.619  1.00 39.25      A
ATOM    853  CB  LYS A 173      24.523  22.061   7.272  1.00 41.89      A
ATOM    854  CG  LYS A 173      23.279  21.298   6.830  1.00 45.52      A
ATOM    855  CD  LYS A 173      23.557  19.808   6.653  1.00 49.60      A
ATOM    856  CE  LYS A 173      24.477  19.530   5.469  1.00 52.63      A
ATOM    857  NZ  LYS A 173      23.855  19.894   4.160  1.00 54.61      A
ATOM    858  C   LYS A 173      23.089  23.608   8.595  1.00 39.30      A
ATOM    859  O   LYS A 173      21.981  23.960   8.201  1.00 39.62      A
ATOM    860  N   ILE A 174      23.320  23.282   9.863  1.00 37.96      A
ATOM    861  CA  ILE A 174      22.229  23.314  10.833  1.00 37.36      A
ATOM    862  CB  ILE A 174      22.159  21.998  11.652  1.00 37.44      A
ATOM    863  CG2 ILE A 174      22.058  20.802  10.709  1.00 38.37      A
ATOM    864  CG1 ILE A 174      23.397  21.850  12.532  1.00 37.25      A
ATOM    865  CD1 ILE A 174      23.355  20.620  13.418  1.00 36.85      A
ATOM    866  C   ILE A 174      22.259  24.492  11.801  1.00 36.71      A
ATOM    867  O   ILE A 174      21.448  24.556  12.724  1.00 38.05      A
ATOM    868  N   GLY A 175      23.185  25.423  11.592  1.00 35.48      A
ATOM    869  CA  GLY A 175      23.265  26.585  12.462  1.00 35.29      A
ATOM    870  C   GLY A 175      24.053  26.360  13.737  1.00 35.06      A
ATOM    871  O   GLY A 175      25.066  27.019  13.970  1.00 37.46      A
ATOM    872  N   SER A 176      23.581  25.441  14.571  1.00 33.94      A
ATOM    873  CA  SER A 176      24.253  25.113  15.822  1.00 32.84      A
ATOM    874  CB  SER A 176      23.938  26.155  16.901  1.00 33.54      A
ATOM    875  OG  SER A 176      22.599  26.056  17.347  1.00 34.86      A
ATOM    876  C   SER A 176      23.796  23.731  16.276  1.00 32.34      A
ATOM    877  O   SER A 176      22.726  23.263  15.884  1.00 32.82      A
ATOM    878  N   PHE A 177      24.609  23.085  17.103  1.00 29.39      A
ATOM    879  CA  PHE A 177      24.313  21.743  17.597  1.00 27.20      A
ATOM    880  CB  PHE A 177      25.621  20.989  17.865  1.00 26.39      A
ATOM    881  CG  PHE A 177      26.372  20.585  16.622  1.00 26.18      A
ATOM    882  CD1 PHE A 177      26.210  21.277  15.426  1.00 25.30      A
ATOM    883  CD2 PHE A 177      27.266  19.516  16.662  1.00 26.05      A
ATOM    884  CE1 PHE A 177      26.923  20.912  14.290  1.00 26.59      A
ATOM    885  CE2 PHE A 177      27.986  19.143  15.532  1.00 26.06      A
ATOM    886  CZ  PHE A 177      27.815  19.841  14.343  1.00 25.42      A
ATOM    887  C   PHE A 177      23.500  21.752  18.884  1.00 27.00      A
ATOM    888  O   PHE A 177      23.704  22.610  19.747  1.00 26.48      A
ATOM    889  N   ASP A 178      22.578  20.802  19.022  1.00 26.70      A
ATOM    890  CA  ASP A 178      21.816  20.729  20.260  1.00 26.35      A
ATOM    891  CB  ASP A 178      20.621  19.773  20.142  1.00 29.90      A
ATOM    892  CG  ASP A 178      21.020  18.372  19.720  1.00 32.28      A
ATOM    893  OD1 ASP A 178      22.157  17.949  20.014  1.00 35.21      A
ATOM    894  OD2 ASP A 178      20.179  17.683  19.105  1.00 34.79      A
ATOM    895  C   ASP A 178      22.810  20.228  21.311  1.00 25.03      A
ATOM    896  O   ASP A 178      23.974  19.968  20.992  1.00 21.24      A
ATOM    897  N   GLU A 179      22.361  20.083  22.552  1.00 23.60      A
ATOM    898  CA  GLU A 179      23.247  19.644  23.619  1.00 25.18      A
ATOM    899  CB  GLU A 179      22.542  19.770  24.971  1.00 27.60      A
ATOM    900  CG  GLU A 179      23.324  19.176  26.130  1.00 32.58      A
ATOM    901  CD  GLU A 179      22.997  19.845  27.449  1.00 35.82      A
ATOM    902  OE1 GLU A 179      21.825  20.224  27.645  1.00 35.95      A
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ATOM    903  OE2 GLU A 179      23.912  19.984  28.291  1.00 38.19      A
ATOM    904  C   GLU A 179      23.808  18.235  23.450  1.00 24.08      A
ATOM    905  O   GLU A 179      24.977  17.989  23.756  1.00 22.79      A
ATOM    906  N   THR A 180      22.983  17.316  22.961  1.00 23.36      A
ATOM    907  CA  THR A 180      23.412  15.935  22.761  1.00 22.15      A
ATOM    908  CB  THR A 180      22.224  15.054  22.320  1.00 23.77      A
ATOM    909  OG1 THR A 180      21.222  15.075  23.341  1.00 26.37      A
ATOM    910  CG2 THR A 180      22.670  13.616  22.088  1.00 22.66      A
ATOM    911  C   THR A 180      24.533  15.830  21.724  1.00 22.01      A
ATOM    912  O   THR A 180      25.533  15.141  21.944  1.00 19.87      A
ATOM    913  N   CYS A 181      24.365  16.511  20.596  1.00 21.21      A
ATOM    914  CA  CYS A 181      25.372  16.480  19.541  1.00 22.22      A
ATOM    915  CB  CYS A 181      24.800  17.065  18.250  1.00 24.62      A
ATOM    916  SG  CYS A 181      23.435  16.080  17.560  1.00 29.50      A
ATOM    917  C   CYS A 181      26.633  17.232  19.954  1.00 23.07      A
ATOM    918  O   CYS A 181      27.746  16.827  19.608  1.00 23.95      A
ATOM    919  N   THR A 182      26.463  18.325  20.695  1.00 22.76      A
ATOM    920  CA  THR A 182      27.606  19.103  21.161  1.00 21.49      A
ATOM    921  CB  THR A 182      27.167  20.346  21.978  1.00 21.37      A
ATOM    922  OG1 THR A 182      26.459  21.262  21.134  1.00 22.50      A
ATOM    923  CG2 THR A 182      28.379  21.046  22.565  1.00 18.36      A
ATOM    924  C   THR A 182      28.454  18.215  22.071  1.00 21.48      A
ATOM    925  O   THR A 182      29.669  18.090  21.894  1.00 19.95      A
ATOM    926  N   ARG A 183      27.798  17.602  23.050  1.00 18.97      A
ATOM    927  CA  ARG A 183      28.468  16.723  23.996  1.00 19.39      A
ATOM    928  CB  ARG A 183      27.455  16.140  24.984  1.00 19.46      A
ATOM    929  CG  ARG A 183      28.030  15.062  25.887  1.00 18.77      A
ATOM    930  CD  ARG A 183      27.021  14.571  26.925  1.00 21.19      A
ATOM    931  NE  ARG A 183      26.605  15.642  27.824  1.00 19.46      A
ATOM    932  CZ  ARG A 183      25.496  16.362  27.679  1.00 20.45      A
ATOM    933  NH1 ARG A 183      24.672  16.123  26.666  1.00 19.81      A
ATOM    934  NH2 ARG A 183      25.224  17.338  28.539  1.00 17.11      A
ATOM    935  C   ARG A 183      29.206  15.577  23.302  1.00 20.02      A
ATOM    936  O   ARG A 183      30.383  15.333  23.573  1.00 19.97      A
ATOM    937  N   PHE A 184      28.520  14.871  22.409  1.00 19.24      A
ATOM    938  CA  PHE A 184      29.144  13.746  21.722  1.00 18.04      A
ATOM    939  CB  PHE A 184      28.158  13.078  20.764  1.00 21.05      A
ATOM    940  CG  PHE A 184      28.719  11.857  20.098  1.00 22.67      A
ATOM    941  CD1 PHE A 184      28.717  10.630  20.754  1.00 22.97      A
ATOM    942  CD2 PHE A 184      29.317  11.949  18.850  1.00 19.97      A
ATOM    943  CE1 PHE A 184      29.308   9.510  20.176  1.00 23.53      A
ATOM    944  CE2 PHE A 184      29.915  10.833  18.263  1.00 24.11      A
ATOM    945  CZ  PHE A 184      29.910   9.613  18.928  1.00 22.97      A
ATOM    946  C   PHE A 184      30.403  14.127  20.941  1.00 17.99      A
ATOM    947  O   PHE A 184      31.461  13.531  21.130  1.00 18.89      A
ATOM    948  N   TYR A 185      30.292  15.110  20.056  1.00 15.73      A
ATOM    949  CA  TYR A 185      31.443  15.519  19.265  1.00 15.72      A
ATOM    950  CB  TYR A 185      30.992  16.413  18.111  1.00 17.33      A
ATOM    951  CG  TYR A 185      30.364  15.584  17.015  1.00 19.37      A
ATOM    952  CD1 TYR A 185      31.159  14.809  16.168  1.00 16.53      A
ATOM    953  CE1 TYR A 185      30.590  13.952  15.232  1.00 18.12      A
ATOM    954  CD2 TYR A 185      28.976  15.484  16.892  1.00 18.18      A
ATOM    955  CE2 TYR A 185      28.398  14.623  15.956  1.00 18.90      A
ATOM    956  CZ  TYR A 185      29.211  13.861  15.133  1.00 18.41      A
ATOM    957  OH  TYR A 185      28.650  12.995  14.218  1.00 20.48      A
ATOM    958  C   TYR A 185      32.544  16.172  20.083  1.00 15.79      A
ATOM    959  O   TYR A 185      33.720  16.015  19.766  1.00 17.69      A
ATOM    960  N   THR A 186      32.176  16.887  21.142  1.00 15.68      A
ATOM    961  CA  THR A 186      33.184  17.504  21.997  1.00 16.03      A
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ATOM    962  CB  THR A 186      32.559  18.403  23.094  1.00 16.62      A
ATOM    963  OG1 THR A 186      31.866  19.503  22.481  1.00 14.79      A
ATOM    964  CG2 THR A 186      33.656  18.953  24.019  1.00 14.68      A
ATOM    965  C   THR A 186      33.954  16.375  22.680  1.00 15.59      A
ATOM    966  O   THR A 186      35.176  16.443  22.823  1.00 13.77      A
ATOM    967  N   ALA A 187      33.234  15.333  23.097  1.00 14.06      A
ATOM    968  CA  ALA A 187      33.869  14.196  23.757  1.00 14.74      A
ATOM    969  CB  ALA A 187      32.810  13.195  24.224  1.00 14.32      A
ATOM    970  C   ALA A 187      34.875  13.509  22.821  1.00 14.41      A
ATOM    971  O   ALA A 187      35.972  13.136  23.247  1.00 15.61      A
ATOM    972  N   GLU A 188      34.516  13.340  21.549  1.00 14.01      A
ATOM    973  CA  GLU A 188      35.443  12.704  20.615  1.00 13.50      A
ATOM    974  CB  GLU A 188      34.782  12.449  19.251  1.00 12.85      A
ATOM    975  CG  GLU A 188      33.622  11.454  19.282  1.00 12.71      A
ATOM    976  CD  GLU A 188      33.464  10.685  17.979  1.00 15.01      A
ATOM    977  OE1 GLU A 188      33.687  11.275  16.899  1.00 13.21      A
ATOM    978  OE2 GLU A 188      33.110   9.484  18.031  1.00 17.69      A
ATOM    979  C   GLU A 188      36.682  13.582  20.436  1.00 13.34      A
ATOM    980  O   GLU A 188      37.803  13.085  20.408  1.00 14.69      A
ATOM    981  N   ILE A 189      36.486  14.893  20.326  1.00 13.52      A
ATOM    982  CA  ILE A 189      37.627  15.787  20.159  1.00 13.35      A
ATOM    983  CB  ILE A 189      37.169  17.247  19.939  1.00 13.95      A
ATOM    984  CG2 ILE A 189      38.381  18.165  19.822  1.00 12.47      A
ATOM    985  CG1 ILE A 189      36.302  17.332  18.671  1.00 13.44      A
ATOM    986  CD1 ILE A 189      35.588  18.664  18.491  1.00 14.29      A
ATOM    987  C   ILE A 189      38.530  15.702  21.394  1.00 14.63      A
ATOM    988  O   ILE A 189      39.753  15.595  21.271  1.00 12.97      A
ATOM    989  N   VAL A 190      37.927  15.751  22.582  1.00 14.35      A
ATOM    990  CA  VAL A 190      38.684  15.655  23.832  1.00 13.22      A
ATOM    991  CB  VAL A 190      37.743  15.690  25.061  1.00 14.28      A
ATOM    992  CG1 VAL A 190      38.509  15.267  26.326  1.00 15.08      A
ATOM    993  CG2 VAL A 190      37.160  17.082  25.233  1.00 12.08      A
ATOM    994  C   VAL A 190      39.468  14.338  23.859  1.00 14.61      A
ATOM    995  O   VAL A 190      40.634  14.304  24.250  1.00 13.72      A
ATOM    996  N   SER A 191      38.825  13.254  23.432  1.00 15.26      A
ATOM    997  CA  SER A 191      39.478  11.943  23.421  1.00 16.81      A
ATOM    998  CB  SER A 191      38.470  10.857  23.041  1.00 16.14      A
ATOM    999  OG  SER A 191      39.018   9.569  23.238  1.00 16.94      A
ATOM   1000  C   SER A 191      40.649  11.928  22.441  1.00 16.58      A
ATOM   1001  O   SER A 191      41.697  11.335  22.713  1.00 13.96      A
ATOM   1002  N   ALA A 192      40.468  12.586  21.300  1.00 15.26      A
ATOM   1003  CA  ALA A 192      41.518  12.645  20.292  1.00 14.37      A
ATOM   1004  CB  ALA A 192      40.989  13.296  19.016  1.00 14.43      A
ATOM   1005  C   ALA A 192      42.695  13.440  20.845  1.00 16.46      A
ATOM   1006  O   ALA A 192      43.851  13.038  20.697  1.00 17.96      A
ATOM   1007  N   LEU A 193      42.401  14.563  21.496  1.00 15.02      A
ATOM   1008  CA  LEU A 193      43.459  15.392  22.067  1.00 15.42      A
ATOM   1009  CB  LEU A 193      42.884  16.712  22.600  1.00 12.88      A
ATOM   1010  CG  LEU A 193      42.445  17.721  21.525  1.00 15.97      A
ATOM   1011  CD1 LEU A 193      41.869  18.979  22.190  1.00 13.97      A
ATOM   1012  CD2 LEU A 193      43.642  18.088  20.655  1.00 14.58      A
ATOM   1013  C   LEU A 193      44.211  14.659  23.174  1.00 14.49      A
ATOM   1014  O   LEU A 193      45.427  14.813  23.310  1.00 16.56      A
ATOM   1015  N   GLU A 194      43.500  13.870  23.975  1.00 13.96      A
ATOM   1016  CA  GLU A 194      44.179  13.123  25.032  1.00 14.08      A
ATOM   1017  CB  GLU A 194      43.190  12.295  25.857  1.00 14.65      A
ATOM   1018  CG  GLU A 194      43.882  11.301  26.789  1.00 17.09      A
ATOM   1019  CD  GLU A 194      42.924  10.592  27.730  1.00 19.59      A
ATOM   1020  OE1 GLU A 194      41.809  10.237  27.295  1.00 19.25      A
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ATOM   1021  OE2 GLU A 194      43.302  10.380  28.906  1.00 20.20      A
ATOM   1022  C   GLU A 194      45.208  12.199  24.386  1.00 13.57      A
ATOM   1023  O   GLU A 194      46.337  12.093  24.847  1.00 14.23      A
ATOM   1024  N   TYR A 195      44.822  11.544  23.301  1.00 14.89      A
ATOM   1025  CA  TYR A 195      45.743  10.642  22.618  1.00 16.58      A
ATOM   1026  CB  TYR A 195      45.030   9.910  21.488  1.00 17.29      A
ATOM   1027  CG  TYR A 195      45.956   9.058  20.649  1.00 17.92      A
ATOM   1028  CD1 TYR A 195      46.347   7.788  21.077  1.00 17.96      A
ATOM   1029  CE1 TYR A 195      47.203   6.996  20.304  1.00 19.77      A
ATOM   1030  CD2 TYR A 195      46.445   9.524  19.428  1.00 16.67      A
ATOM   1031  CE2 TYR A 195      47.299   8.744  18.650  1.00 18.51      A
ATOM   1032  CZ  TYR A 195      47.671   7.481  19.094  1.00 20.24      A
ATOM   1033  OH  TYR A 195      48.506   6.705  18.325  1.00 21.89      A
ATOM   1034  C   TYR A 195      46.917  11.419  22.035  1.00 16.98      A
ATOM   1035  O   TYR A 195      48.081  11.047  22.203  1.00 14.61      A
ATOM   1036  N   LEU A 196      46.599  12.507  21.347  1.00 16.30      A
ATOM   1037  CA  LEU A 196      47.619  13.328  20.720  1.00 18.15      A
ATOM   1038  CB  LEU A 196      46.969  14.502  19.982  1.00 18.59      A
ATOM   1039  CG  LEU A 196      47.834  15.203  18.935  1.00 22.51      A
ATOM   1040  CD1 LEU A 196      48.222  14.206  17.841  1.00 20.94      A
ATOM   1041  CD2 LEU A 196      47.060  16.375  18.338  1.00 22.98      A
ATOM   1042  C   LEU A 196      48.592  13.844  21.763  1.00 17.75      A
ATOM   1043  O   LEU A 196      49.801  13.644  21.649  1.00 18.33      A
ATOM   1044  N   HIS A 197      48.064  14.495  22.792  1.00 17.12      A
ATOM   1045  CA  HIS A 197      48.913  15.042  23.842  1.00 18.47      A
ATOM   1046  CB  HIS A 197      48.069  15.866  24.817  1.00 15.90      A
ATOM   1047  CG  HIS A 197      47.571  17.152  24.231  1.00 19.15      A
ATOM   1048  CD2 HIS A 197      47.830  17.745  23.038  1.00 18.22      A
ATOM   1049  ND1 HIS A 197      46.704  17.992  24.897  1.00 17.47      A
ATOM   1050  CE1 HIS A 197      46.450  19.047  24.139  1.00 19.74      A
ATOM   1051  NE2 HIS A 197      47.119  18.921  23.007  1.00 15.69      A
ATOM   1052  C   HIS A 197      49.696  13.958  24.572  1.00 19.40      A
ATOM   1053  O   HIS A 197      50.823  14.192  25.021  1.00 19.42      A
ATOM   1054  N   GLY A 198      49.106  12.770  24.679  1.00 18.59      A
ATOM   1055  CA  GLY A 198      49.793  11.675  25.339  1.00 19.60      A
ATOM   1056  C   GLY A 198      51.075  11.307  24.612  1.00 21.86      A
ATOM   1057  O   GLY A 198      51.963  10.682  25.186  1.00 23.09      A
ATOM   1058  N   LYS A 199      51.174  11.687  23.341  1.00 22.81      A
ATOM   1059  CA  LYS A 199      52.368  11.401  22.549  1.00 24.43      A
ATOM   1060  CB  LYS A 199      51.990  10.905  21.154  1.00 26.00      A
ATOM   1061  CG  LYS A 199      51.378   9.520  21.133  1.00 30.98      A
ATOM   1062  CD  LYS A 199      51.291   9.002  19.708  1.00 36.85      A
ATOM   1063  CE  LYS A 199      50.832   7.559  19.682  1.00 40.37      A
ATOM   1064  NZ  LYS A 199      51.646   6.691  20.581  1.00 43.48      A
ATOM   1065  C   LYS A 199      53.253  12.631  22.414  1.00 23.88      A
ATOM   1066  O   LYS A 199      54.144  12.669  21.568  1.00 24.97      A
ATOM   1067  N   GLY A 200      52.997  13.638  23.243  1.00 24.00      A
ATOM   1068  CA  GLY A 200      53.790  14.853  23.203  1.00 22.12      A
ATOM   1069  C   GLY A 200      53.665  15.632  21.907  1.00 22.14      A
ATOM   1070  O   GLY A 200      54.632  16.231  21.439  1.00 22.41      A
ATOM   1071  N   ILE A 201      52.475  15.630  21.320  1.00 20.00      A
ATOM   1072  CA  ILE A 201      52.252  16.355  20.080  1.00 18.93      A
ATOM   1073  CB  ILE A 201      51.784  15.414  18.955  1.00 19.70      A
ATOM   1074  CG2 ILE A 201      51.414  16.226  17.716  1.00 20.12      A
ATOM   1075  CG1 ILE A 201      52.880  14.395  18.636  1.00 20.03      A
ATOM   1076  CD1 ILE A 201      52.408  13.258  17.745  1.00 22.75      A
ATOM   1077  C   ILE A 201      51.193  17.425  20.270  1.00 19.87      A
ATOM   1078  O   ILE A 201      50.121  17.161  20.817  1.00 20.08      A
ATOM   1079  N   ILE A 202      51.508  18.633  19.815  1.00 19.94      A
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	ATOM	1080	CA	ILE	A	202	50.601	19.772	19.891	1.00	20.45	A
	ATOM	1081	CB	ILE	A	202	51.352	21.040	20.356	1.00	22.21	A
	ATOM	1082	CG2	ILE	A	202	50.381	22.220	20.470	1.00	22.67	A
	ATOM	1083	CG1	ILE	A	202	52.033	20.775	21.700	1.00	24.19	A
	ATOM	1084	CD1	ILE	A	202	52.914	21.920	22.169	1.00	25.39	A
	ATOM	1085	C	ILE	A	202	50.105	19.999	18.464	1.00	20.71	A
	ATOM	1086	O	ILE	A	202	50.910	20.067	17.538	1.00	19.48	A
	ATOM	1087	N	HIS	A	203	48.795	20.108	18.270	1.00	18.65	A
	ATOM	1088	CA	HIS	A	203	48.280	20.319	16.919	1.00	18.02	A
	ATOM	1089	CB	HIS	A	203	46.775	20.057	16.874	1.00	16.31	A
	ATOM	1090	CG	HIS	A	203	46.199	20.136	15.495	1.00	18.36	A
	ATOM	1091	CD2	HIS	A	203	46.043	21.186	14.655	1.00	16.42	A
	ATOM	1092	ND1	HIS	A	203	45.759	19.026	14.806	1.00	19.50	A
	ATOM	1093	CE1	HIS	A	203	45.359	19.389	13.600	1.00	17.64	A
	ATOM	1094	NE2	HIS	A	203	45.522	20.694	13.483	1.00	20.87	A
	ATOM	1095	C	HIS	A	203	48.589	21.738	16.405	1.00	18.92	A
	ATOM	1096	O	HIS	A	203	49.073	21.906	15.282	1.00	16.21	A
	ATOM	1097	N	ARG	A	204	48.301	22.744	17.232	1.00	18.60	A
	ATOM	1098	CA	ARG	A	204	48.552	24.157	16.914	1.00	19.81	A
	ATOM	1099	CB	ARG	A	204	49.998	24.365	16.458	1.00	21.61	A
	ATOM	1100	CG	ARG	A	204	51.024	24.137	17.550	1.00	23.82	A
	ATOM	1101	CD	ARG	A	204	52.323	24.870	17.252	1.00	27.62	A
	ATOM	1102	NE	ARG	A	204	52.932	24.449	15.994	1.00	29.43	A
	ATOM	1103	CZ	ARG	A	204	54.125	24.861	15.572	1.00	33.10	A
	ATOM	1104	NH1	ARG	A	204	54.835	25.706	16.311	1.00	32.12	A
	ATOM	1105	NH2	ARG	A	204	54.614	24.426	14.418	1.00	30.25	A
	ATOM	1106	C	ARG	A	204	47.624	24.830	15.905	1.00	20.03	A
	ATOM	1107	O	ARG	A	204	47.711	26.038	15.698	1.00	20.88	A
	ATOM	1108	N	ASP	A	205	46.755	24.071	15.255	1.00	18.96	A
	ATOM	1109	CA	ASP	A	205	45.828	24.692	14.325	1.00	17.90	A
	ATOM	1110	CB	ASP	A	205	46.418	24.741	12.914	1.00	18.95	A
	ATOM	1111	CG	ASP	A	205	45.655	25.688	12.008	1.00	20.36	A
	ATOM	1112	OD1	ASP	A	205	44.939	26.560	12.545	1.00	20.35	A
	ATOM	1113	OD2	ASP	A	205	45.772	25.573	10.771	1.00	22.49	A
	ATOM	1114	C	ASP	A	205	44.500	23.956	14.328	1.00	19.60	A
	ATOM	1115	O	ASP	A	205	43.876	23.751	13.287	1.00	21.53	A
	ATOM	1116	N	LEU	A	206	44.063	23.569	15.521	1.00	18.53	A
	ATOM	1117	CA	LEU	A	206	42.813	22.851	15.667	1.00	19.18	A
	ATOM	1118	CB	LEU	A	206	42.693	22.295	17.087	1.00	18.94	A
	ATOM	1119	CG	LEU	A	206	41.511	21.358	17.346	1.00	23.10	A
	ATOM	1120	CD1	LEU	A	206	41.615	20.142	16.436	1.00	23.01	A
	ATOM	1121	CD2	LEU	A	206	41.504	20.933	18.808	1.00	22.97	A
	ATOM	1122	C	LEU	A	206	41.639	23.772	15.361	1.00	19.05	A
	ATOM	1123	O	LEU	A	206	41.556	24.880	15.886	1.00	19.25	A
	ATOM	1124	N	LYS	A	207	40.740	23.307	14.500	1.00	17.54	A
	ATOM	1125	CA	LYS	A	207	39.564	24.081	14.110	1.00	18.60	A
	ATOM	1126	CB	LYS	A	207	39.980	25.248	13.196	1.00	18.98	A
	ATOM	1127	CG	LYS	A	207	40.786	24.817	11.982	1.00	18.20	A
	ATOM	1128	CD	LYS	A	207	41.246	26.000	11.139	1.00	21.42	A
	ATOM	1129	CE	LYS	A	207	42.223	25.537	10.062	1.00	23.21	A
	ATOM	1130	NZ	LYS	A	207	42.561	26.604	9.084	1.00	29.61	A
	ATOM	1131	C	LYS	A	207	38.566	23.181	13.388	1.00	18.18	A
	ATOM	1132	O	LYS	A	207	38.921	22.100	12.915	1.00	18.11	A
	ATOM	1133	N	PRO	A	208	37.298	23.614	13.293	1.00	20.26	A
	ATOM	1134	CD	PRO	A	208	36.713	24.833	13.882	1.00	18.79	A
	ATOM	1135	CA	PRO	A	208	36.272	22.814	12.616	1.00	19.67	A
	ATOM	1136	CB	PRO	A	208	35.063	23.742	12.608	1.00	19.45	A
	ATOM	1137	CG	PRO	A	208	35.231	24.509	13.891	1.00	21.81	A
	ATOM	1138	C	PRO	A	208	36.674	22.372	11.209	1.00	21.04	A

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ATOM   1139  O   PRO A 208      36.264  21.307  10.751  1.00 21.19      A
ATOM   1140  N   GLU A 209      37.474  23.188  10.528  1.00 21.69      A
ATOM   1141  CA  GLU A 209      37.928  22.872   9.170  1.00 22.64      A
ATOM   1142  CB  GLU A 209      38.644  24.084   8.558  1.00 23.65      A
ATOM   1143  CG  GLU A 209      39.253  23.825   7.185  1.00 27.24      A
ATOM   1144  CD  GLU A 209      40.155  24.958   6.716  1.00 29.40      A
ATOM   1145  OE1 GLU A 209      39.660  26.094   6.553  1.00 29.68      A
ATOM   1146  OE2 GLU A 209      41.363  24.711   6.511  1.00 30.07      A
ATOM   1147  C   GLU A 209      38.879  21.668   9.159  1.00 22.28      A
ATOM   1148  O   GLU A 209      38.955  20.933   8.170  1.00 21.36      A
ATOM   1149  N   ASN A 210      39.600  21.490  10.263  1.00 19.90      A
ATOM   1150  CA  ASN A 210      40.574  20.412  10.436  1.00 19.44      A
ATOM   1151  CB  ASN A 210      41.744  20.912  11.287  1.00 20.07      A
ATOM   1152  CG  ASN A 210      42.746  21.698  10.479  1.00 25.77      A
ATOM   1153  OD1 ASN A 210      43.571  22.427  11.029  1.00 26.73      A
ATOM   1154  ND2 ASN A 210      42.687  21.548   9.158  1.00 25.15      A
ATOM   1155  C   ASN A 210      40.005  19.151  11.078  1.00 18.63      A
ATOM   1156  O   ASN A 210      40.712  18.154  11.234  1.00 18.29      A
ATOM   1157  N   ILE A 211      38.739  19.202  11.469  1.00 16.31      A
ATOM   1158  CA  ILE A 211      38.090  18.058  12.085  1.00 15.49      A
ATOM   1159  CB  ILE A 211      37.336  18.488  13.354  1.00 15.40      A
ATOM   1160  CG2 ILE A 211      36.582  17.311  13.950  1.00 14.59      A
ATOM   1161  CG1 ILE A 211      38.342  19.046  14.365  1.00 15.91      A
ATOM   1162  CD1 ILE A 211      37.720  19.669  15.590  1.00 15.98      A
ATOM   1163  C   ILE A 211      37.131  17.485  11.059  1.00 17.26      A
ATOM   1164  O   ILE A 211      35.995  17.947  10.926  1.00 18.16      A
ATOM   1165  N   LEU A 212      37.599  16.486  10.317  1.00 15.97      A
ATOM   1166  CA  LEU A 212      36.784  15.875   9.274  1.00 17.08      A
ATOM   1167  CB  LEU A 212      37.685  15.249   8.202  1.00 17.78      A
ATOM   1168  CG  LEU A 212      38.785  16.157   7.640  1.00 18.92      A
ATOM   1169  CD1 LEU A 212      39.476  15.450   6.485  1.00 22.09      A
ATOM   1170  CD2 LEU A 212      38.188  17.482   7.166  1.00 19.91      A
ATOM   1171  C   LEU A 212      35.843  14.825   9.837  1.00 18.35      A
ATOM   1172  O   LEU A 212      35.957  14.433  11.002  1.00 19.39      A
ATOM   1173  N   LEU A 213      34.915  14.368   9.000  1.00 17.84      A
ATOM   1174  CA  LEU A 213      33.942  13.362   9.403  1.00 19.94      A
ATOM   1175  CB  LEU A 213      32.556  14.004   9.487  1.00 20.84      A
ATOM   1176  CG  LEU A 213      32.396  15.059  10.583  1.00 20.31      A
ATOM   1177  CD1 LEU A 213      31.124  15.837  10.367  1.00 22.75      A
ATOM   1178  CD2 LEU A 213      32.379  14.378  11.940  1.00 23.93      A
ATOM   1179  C   LEU A 213      33.914  12.187   8.426  1.00 20.98      A
ATOM   1180  O   LEU A 213      33.743  12.379   7.218  1.00 19.55      A
ATOM   1181  N   ASN A 214      34.088  10.970   8.935  1.00 20.44      A
ATOM   1182  CA  ASN A 214      34.055   9.814   8.049  1.00 23.77      A
ATOM   1183  CB  ASN A 214      34.745   8.596   8.674  1.00 25.30      A
ATOM   1184  CG  ASN A 214      34.077   8.127   9.948  1.00 32.04      A
ATOM   1185  OD1 ASN A 214      32.908   8.422  10.206  1.00 34.43      A
ATOM   1186  ND2 ASN A 214      34.818   7.369  10.752  1.00 33.85      A
ATOM   1187  C   ASN A 214      32.618   9.466   7.693  1.00 24.07      A
ATOM   1188  O   ASN A 214      31.672  10.113   8.150  1.00 19.94      A
ATOM   1189  N   GLU A 215      32.459   8.433   6.879  1.00 25.77      A
ATOM   1190  CA  GLU A 215      31.138   8.003   6.445  1.00 28.69      A
ATOM   1191  CB  GLU A 215      31.275   6.796   5.513  1.00 31.98      A
ATOM   1192  CG  GLU A 215      29.970   6.334   4.896  1.00 40.22      A
ATOM   1193  CD  GLU A 215      30.182   5.312   3.795  1.00 44.27      A
ATOM   1194  OE1 GLU A 215      30.817   4.268   4.065  1.00 46.46      A
ATOM   1195  OE2 GLU A 215      29.716   5.556   2.660  1.00 46.13      A
ATOM   1196  C   GLU A 215      30.188   7.673   7.601  1.00 28.41      A
ATOM   1197  O   GLU A 215      28.971   7.769   7.447  1.00 28.52      A
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ATOM   1198  N   ASP A 216      30.737   7.287   8.752  1.00 26.77      A
ATOM   1199  CA  ASP A 216      29.914   6.953   9.917  1.00 27.28      A
ATOM   1200  CB  ASP A 216      30.538   5.795  10.696  1.00 31.27      A
ATOM   1201  CG  ASP A 216      30.390   4.466   9.979  1.00 37.61      A
ATOM   1202  OD1 ASP A 216      29.274   4.170   9.499  1.00 39.45      A
ATOM   1203  OD2 ASP A 216      31.382   3.710   9.902  1.00 41.84      A
ATOM   1204  C   ASP A 216      29.697   8.135  10.862  1.00 26.37      A
ATOM   1205  O   ASP A 216      29.136   7.984  11.950  1.00 25.73      A
ATOM   1206  N   MET A 217      30.156   9.306  10.441  1.00 23.02      A
ATOM   1207  CA  MET A 217      30.015  10.527  11.218  1.00 21.83      A
ATOM   1208  CB  MET A 217      28.537  10.789  11.517  1.00 23.24      A
ATOM   1209  CG  MET A 217      27.742  11.186  10.274  1.00 22.98      A
ATOM   1210  SD  MET A 217      28.464  12.616   9.430  1.00 27.57      A
ATOM   1211  CE  MET A 217      27.679  13.974  10.332  1.00 26.68      A
ATOM   1212  C   MET A 217      30.844  10.618  12.502  1.00 21.51      A
ATOM   1213  O   MET A 217      30.474  11.323  13.440  1.00 18.62      A
ATOM   1214  N   HIS A 218      31.957   9.892  12.544  1.00 20.10      A
ATOM   1215  CA  HIS A 218      32.873   9.964  13.678  1.00 19.86      A
ATOM   1216  CB  HIS A 218      33.482   8.594  13.977  1.00 20.21      A
ATOM   1217  CG  HIS A 218      32.551   7.667  14.698  1.00 22.40      A
ATOM   1218  CD2 HIS A 218      31.910   6.547  14.287  1.00 21.27      A
ATOM   1219  ND1 HIS A 218      32.177   7.863  16.011  1.00 19.59      A
ATOM   1220  CE1 HIS A 218      31.348   6.902  16.379  1.00 21.88      A
ATOM   1221  NE2 HIS A 218      31.168   6.091  15.351  1.00 22.08      A
ATOM   1222  C   HIS A 218      33.947  10.921  13.172  1.00 19.10      A
ATOM   1223  O   HIS A 218      34.170  11.004  11.965  1.00 20.31      A
ATOM   1224  N   ILE A 219      34.617  11.638  14.067  1.00 17.21      A
ATOM   1225  CA  ILE A 219      35.628  12.586  13.618  1.00 15.26      A
ATOM   1226  CB  ILE A 219      35.987  13.614  14.716  1.00 15.38      A
ATOM   1227  CG2 ILE A 219      34.722  14.305  15.221  1.00 14.58      A
ATOM   1228  CG1 ILE A 219      36.734  12.919  15.864  1.00 14.46      A
ATOM   1229  CD1 ILE A 219      37.279  13.885  16.911  1.00 13.74      A
ATOM   1230  C   ILE A 219      36.929  11.944  13.161  1.00 16.21      A
ATOM   1231  O   ILE A 219      37.238  10.799  13.500  1.00 15.88      A
ATOM   1232  N   GLN A 220      37.677  12.711  12.378  1.00 15.62      A
ATOM   1233  CA  GLN A 220      38.980  12.316  11.876  1.00 17.84      A
ATOM   1234  CB  GLN A 220      38.872  11.595  10.525  1.00 20.00      A
ATOM   1235  CG  GLN A 220      38.463  10.129  10.659  1.00 26.97      A
ATOM   1236  CD  GLN A 220      38.648   9.343   9.372  1.00 29.95      A
ATOM   1237  OE1 GLN A 220      37.968   9.590   8.373  1.00 33.12      A
ATOM   1238  NE2 GLN A 220      39.578   8.393   9.389  1.00 30.47      A
ATOM   1239  C   GLN A 220      39.757  13.610  11.735  1.00 17.00      A
ATOM   1240  O   GLN A 220      39.609  14.339  10.751  1.00 18.27      A
ATOM   1241  N   ILE A 221      40.566  13.906  12.746  1.00 14.34      A
ATOM   1242  CA  ILE A 221      41.361  15.120  12.753  1.00 14.46      A
ATOM   1243  CB  ILE A 221      41.867  15.416  14.175  1.00 12.30      A
ATOM   1244  CG2 ILE A 221      42.764  16.656  14.167  1.00 14.78      A
ATOM   1245  CG1 ILE A 221      40.660  15.613  15.102  1.00 13.92      A
ATOM   1246  CD1 ILE A 221      41.003  15.901  16.543  1.00 15.06      A
ATOM   1247  C   ILE A 221      42.536  14.996  11.783  1.00 15.44      A
ATOM   1248  O   ILE A 221      43.106  13.915  11.613  1.00 13.93      A
ATOM   1249  N   THR A 222      42.877  16.101  11.127  1.00 15.36      A
ATOM   1250  CA  THR A 222      43.980  16.098  10.174  1.00 17.52      A
ATOM   1251  CB  THR A 222      43.470  15.836   8.750  1.00 19.92      A
ATOM   1252  OG1 THR A 222      44.587  15.637   7.875  1.00 18.78      A
ATOM   1253  CG2 THR A 222      42.630  17.018   8.257  1.00 18.16      A
ATOM   1254  C   THR A 222      44.735  17.428  10.192  1.00 19.60      A
ATOM   1255  O   THR A 222      44.509  18.257  11.084  1.00 18.59      A
ATOM   1256  N   ASP A 223      45.630  17.610   9.216  1.00 18.69      A
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ATOM   1257  CA  ASP A 223      46.440  18.825   9.069  1.00 20.12      A
ATOM   1258  CB  ASP A 223      45.532  20.065   9.108  1.00 23.51      A
ATOM   1259  CG  ASP A 223      46.248  21.335   8.670  1.00 27.09      A
ATOM   1260  OD1 ASP A 223      47.283  21.227   7.975  1.00 26.28      A
ATOM   1261  OD2 ASP A 223      45.765  22.438   9.009  1.00 26.15      A
ATOM   1262  C   ASP A 223      47.516  18.913  10.150  1.00 21.73      A
ATOM   1263  O   ASP A 223      47.439  19.751  11.055  1.00 22.76      A
ATOM   1264  N   PHE A 224      48.535  18.063  10.027  1.00 20.75      A
ATOM   1265  CA  PHE A 224      49.611  17.988  11.009  1.00 20.11      A
ATOM   1266  CB  PHE A 224      49.805  16.527  11.424  1.00 20.62      A
ATOM   1267  CG  PHE A 224      48.682  15.991  12.263  1.00 21.41      A
ATOM   1268  CD1 PHE A 224      48.598  16.312  13.614  1.00 23.05      A
ATOM   1269  CD2 PHE A 224      47.681  15.212  11.693  1.00 22.27      A
ATOM   1270  CE1 PHE A 224      47.528  15.868  14.389  1.00 23.30      A
ATOM   1271  CE2 PHE A 224      46.606  14.763  12.457  1.00 21.11      A
ATOM   1272  CZ  PHE A 224      46.530  15.093  13.807  1.00 22.02      A
ATOM   1273  C   PHE A 224      50.957  18.583  10.619  1.00 20.45      A
ATOM   1274  O   PHE A 224      51.905  18.547  11.407  1.00 20.73      A
ATOM   1275  N   GLY A 225      51.049  19.125   9.412  1.00 22.02      A
ATOM   1276  CA  GLY A 225      52.301  19.713   8.981  1.00 22.66      A
ATOM   1277  C   GLY A 225      52.742  20.822   9.920  1.00 24.99      A
ATOM   1278  O   GLY A 225      53.939  21.041  10.122  1.00 24.52      A
ATOM   1279  N   THR A 226      51.779  21.524  10.508  1.00 23.50      A
ATOM   1280  CA  THR A 226      52.106  22.613  11.416  1.00 25.16      A
ATOM   1281  CB  THR A 226      51.199  23.829  11.160  1.00 24.76      A
ATOM   1282  OG1 THR A 226      49.831  23.410  11.113  1.00 22.68      A
ATOM   1283  CG2 THR A 226      51.571  24.490   9.834  1.00 25.00      A
ATOM   1284  C   THR A 226      52.046  22.233  12.894  1.00 25.79      A
ATOM   1285  O   THR A 226      52.019  23.100  13.768  1.00 24.54      A
ATOM   1286  N   ALA A 227      52.037  20.935  13.173  1.00 24.97      A
ATOM   1287  CA  ALA A 227      52.004  20.475  14.550  1.00 25.49      A
ATOM   1288  CB  ALA A 227      51.659  18.993  14.607  1.00 22.85      A
ATOM   1289  C   ALA A 227      53.384  20.715  15.149  1.00 27.70      A
ATOM   1290  O   ALA A 227      54.331  21.047  14.435  1.00 26.60      A
ATOM   1291  N   LYS A 228      53.491  20.558  16.461  1.00 28.53      A
ATOM   1292  CA  LYS A 228      54.760  20.745  17.149  1.00 32.12      A
ATOM   1293  CB  LYS A 228      54.699  21.974  18.054  1.00 33.81      A
ATOM   1294  CG  LYS A 228      56.007  22.294  18.765  1.00 41.23      A
ATOM   1295  CD  LYS A 228      57.082  22.725  17.768  1.00 47.57      A
ATOM   1296  CE  LYS A 228      58.401  23.056  18.462  1.00 49.82      A
ATOM   1297  NZ  LYS A 228      59.459  23.425  17.480  1.00 51.49      A
ATOM   1298  C   LYS A 228      55.019  19.504  17.985  1.00 33.25      A
ATOM   1299  O   LYS A 228      54.190  19.129  18.815  1.00 33.70      A
ATOM   1300  N   VAL A 229      56.159  18.860  17.756  1.00 33.64      A
ATOM   1301  CA  VAL A 229      56.516  17.661  18.501  1.00 34.66      A
ATOM   1302  CB  VAL A 229      57.248  16.646  17.609  1.00 33.50      A
ATOM   1303  CG1 VAL A 229      57.619  15.419  18.415  1.00 32.34      A
ATOM   1304  CG2 VAL A 229      56.370  16.264  16.436  1.00 34.25      A
ATOM   1305  C   VAL A 229      57.420  18.035  19.668  1.00 37.57      A
ATOM   1306  O   VAL A 229      58.581  18.392  19.474  1.00 35.91      A
ATOM   1307  N   LEU A 230      56.877  17.948  20.878  1.00 40.57      A
ATOM   1308  CA  LEU A 230      57.615  18.289  22.088  1.00 46.10      A
ATOM   1309  CB  LEU A 230      56.654  18.417  23.270  1.00 44.71      A
ATOM   1310  CG  LEU A 230      55.627  19.545  23.207  1.00 44.50      A
ATOM   1311  CD1 LEU A 230      54.673  19.430  24.383  1.00 44.39      A
ATOM   1312  CD2 LEU A 230      56.340  20.885  23.214  1.00 44.81      A
ATOM   1313  C   LEU A 230      58.695  17.279  22.440  1.00 50.42      A
ATOM   1314  O   LEU A 230      58.603  16.104  22.089  1.00 51.64      A
ATOM   1315  N   SER A 231      59.717  17.756  23.145  1.00 55.81      A
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ATOM   1316  CA  SER A 231      60.824  16.914  23.583  1.00 61.14      A
ATOM   1317  CB  SER A 231      62.077  17.200  22.750  1.00 61.27      A
ATOM   1318  OG  SER A 231      62.444  18.568  22.823  1.00 62.85      A
ATOM   1319  C   SER A 231      61.124  17.126  25.071  1.00 64.65      A
ATOM   1320  O   SER A 231      61.392  16.164  25.794  1.00 65.70      A
ATOM   1321  N   PRO A 232      61.081  18.387  25.549  1.00 67.54      A
ATOM   1322  CD  PRO A 232      60.854  19.651  24.823  1.00 68.60      A
ATOM   1323  CA  PRO A 232      61.358  18.655  26.966  1.00 68.74      A
ATOM   1324  CB  PRO A 232      61.109  20.158  27.086  1.00 68.83      A
ATOM   1325  CG  PRO A 232      61.505  20.666  25.737  1.00 68.96      A
ATOM   1326  C   PRO A 232      60.460  17.846  27.899  1.00 69.17      A
ATOM   1327  O   PRO A 232      59.335  17.494  27.541  1.00 69.94      A
ATOM   1328  N   ALA A 237      57.424  23.198  27.637  1.00 80.06      A
ATOM   1329  CA  ALA A 237      56.783  23.047  26.335  1.00 79.29      A
ATOM   1330  CB  ALA A 237      55.275  22.907  26.512  1.00 78.64      A
ATOM   1331  C   ALA A 237      57.092  24.239  25.433  1.00 79.07      A
ATOM   1332  O   ALA A 237      56.250  25.113  25.249  1.00 79.47      A
ATOM   1333  N   ALA A 238      58.297  24.280  24.871  1.00 78.57      A
ATOM   1334  CA  ALA A 238      58.683  25.383  23.992  1.00 78.50      A
ATOM   1335  CB  ALA A 238      60.186  25.347  23.728  1.00 78.50      A
ATOM   1336  C   ALA A 238      57.920  25.327  22.673  1.00 78.15      A
ATOM   1337  O   ALA A 238      57.243  24.341  22.375  1.00 77.96      A
ATOM   1338  N   ALA A 239      58.027  26.393  21.887  1.00 77.28      A
ATOM   1339  CA  ALA A 239      57.338  26.452  20.603  1.00 76.27      A
ATOM   1340  CB  ALA A 239      55.849  26.489  20.827  1.00 76.61      A
ATOM   1341  C   ALA A 239      57.766  27.667  19.793  1.00 75.38      A
ATOM   1342  O   ALA A 239      58.955  27.955  19.700  1.00 75.89      A
ATOM   1343  N   ASN A 240      56.781  28.357  19.214  1.00 73.95      A
ATOM   1344  CA  ASN A 240      56.967  29.553  18.389  1.00 71.07      A
ATOM   1345  CB  ASN A 240      58.151  30.400  18.874  1.00 71.47      A
ATOM   1346  CG  ASN A 240      59.459  30.055  18.174  1.00 72.06      A
ATOM   1347  OD1 ASN A 240      59.575  30.149  16.943  1.00 72.03      A
ATOM   1348  ND2 ASN A 240      60.470  29.665  18.964  1.00 71.91      A
ATOM   1349  C   ASN A 240      57.188  29.178  16.928  1.00 69.41      A
ATOM   1350  O   ASN A 240      57.480  28.024  16.624  1.00 70.09      A
ATOM   1351  N   ALA A 241      57.055  30.165  16.038  1.00 66.62      A
ATOM   1352  CA  ALA A 241      57.246  30.013  14.585  1.00 63.94      A
ATOM   1353  C   ALA A 241      55.952  30.080  13.772  1.00 60.63      A
ATOM   1354  O   ALA A 241      55.840  30.880  12.845  1.00 61.29      A
ATOM   1355  CB  ALA A 241      57.979  28.704  14.246  1.00 65.23      A
ATOM   1356  N   PHE A 242      54.984  29.236  14.113  1.00 56.72      A
ATOM   1357  CA  PHE A 242      53.712  29.196  13.394  1.00 52.53      A
ATOM   1358  CB  PHE A 242      53.419  27.767  12.923  1.00 49.14      A
ATOM   1359  CG  PHE A 242      52.040  27.590  12.354  1.00 47.38      A
ATOM   1360  CD1 PHE A 242      51.731  28.067  11.085  1.00 47.69      A
ATOM   1361  CD2 PHE A 242      51.038  26.975  13.102  1.00 45.45      A
ATOM   1362  CE1 PHE A 242      50.445  27.937  10.565  1.00 46.75      A
ATOM   1363  CE2 PHE A 242      49.751  26.840  12.594  1.00 45.41      A
ATOM   1364  CZ  PHE A 242      49.453  27.323  11.322  1.00 46.55      A
ATOM   1365  C   PHE A 242      52.534  29.688  14.229  1.00 50.08      A
ATOM   1366  O   PHE A 242      52.502  29.505  15.444  1.00 49.86      A
ATOM   1367  N   VAL A 243      51.566  30.305  13.557  1.00 47.67      A
ATOM   1368  CA  VAL A 243      50.355  30.809  14.200  1.00 46.21      A
ATOM   1369  CB  VAL A 243      50.340  32.352  14.258  1.00 47.36      A
ATOM   1370  CG1 VAL A 243      49.012  32.844  14.825  1.00 47.54      A
ATOM   1371  CG2 VAL A 243      51.497  32.842  15.109  1.00 48.50      A
ATOM   1372  C   VAL A 243      49.150  30.342  13.389  1.00 44.12      A
ATOM   1373  O   VAL A 243      48.956  30.765  12.247  1.00 44.46      A
ATOM   1374  N   GLY A 244      48.348  29.467  13.985  1.00 40.48      A
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ATOM	1375	CA	GLY	A	244	47.176	28.941	13.306	1.00	37.65	A
ATOM	1376	C	GLY	A	244	46.101	29.960	12.964	1.00	35.39	A
ATOM	1377	O	GLY	A	244	46.313	31.168	13.065	1.00	35.92	A
ATOM	1378	N	THR	A	245	44.936	29.463	12.560	1.00	33.30	A
ATOM	1379	CA	THR	A	245	43.813	30.312	12.184	1.00	30.20	A
ATOM	1380	CB	THR	A	245	42.593	29.450	11.829	1.00	32.00	A
ATOM	1381	OG1	THR	A	245	42.952	28.573	10.755	1.00	32.81	A
ATOM	1382	CG2	THR	A	245	41.419	30.319	11.390	1.00	28.34	A
ATOM	1383	C	THR	A	245	43.476	31.296	13.296	1.00	27.96	A
ATOM	1384	O	THR	A	245	43.212	30.907	14.434	1.00	25.46	A
ATOM	1385	N	ALA	A	246	43.486	32.576	12.938	1.00	25.22	A
ATOM	1386	CA	ALA	A	246	43.247	33.675	13.867	1.00	23.27	A
ATOM	1387	CB	ALA	A	246	42.956	34.955	13.082	1.00	22.94	A
ATOM	1388	C	ALA	A	246	42.178	33.475	14.934	1.00	21.27	A
ATOM	1389	O	ALA	A	246	42.431	33.705	16.114	1.00	20.93	A
ATOM	1390	N	GLN	A	247	40.988	33.047	14.536	1.00	19.67	A
ATOM	1391	CA	GLN	A	247	39.911	32.886	15.504	1.00	20.17	A
ATOM	1392	CB	GLN	A	247	38.608	32.535	14.779	1.00	21.89	A
ATOM	1393	CG	GLN	A	247	38.522	33.076	13.355	1.00	26.18	A
ATOM	1394	CD	GLN	A	247	37.220	33.794	13.064	1.00	27.30	A
ATOM	1395	OE1	GLN	A	247	36.172	33.447	13.605	1.00	30.13	A
ATOM	1396	NE2	GLN	A	247	37.278	34.792	12.189	1.00	28.70	A
ATOM	1397	C	GLN	A	247	40.181	31.849	16.595	1.00	19.43	A
ATOM	1398	O	GLN	A	247	39.546	31.883	17.648	1.00	18.93	A
ATOM	1399	N	TYR	A	248	41.132	30.948	16.359	1.00	18.60	A
ATOM	1400	CA	TYR	A	248	41.441	29.896	17.329	1.00	19.20	A
ATOM	1401	CB	TYR	A	248	41.333	28.529	16.642	1.00	17.53	A
ATOM	1402	CG	TYR	A	248	40.013	28.362	15.927	1.00	19.32	A
ATOM	1403	CD1	TYR	A	248	38.859	28.010	16.625	1.00	17.69	A
ATOM	1404	CE1	TYR	A	248	37.617	27.976	15.990	1.00	18.18	A
ATOM	1405	CD2	TYR	A	248	39.897	28.664	14.569	1.00	16.87	A
ATOM	1406	CE2	TYR	A	248	38.665	28.635	13.924	1.00	19.17	A
ATOM	1407	CZ	TYR	A	248	37.527	28.295	14.643	1.00	19.46	A
ATOM	1408	OH	TYR	A	248	36.299	28.311	14.023	1.00	18.98	A
ATOM	1409	C	TYR	A	248	42.810	30.039	17.993	1.00	20.42	A
ATOM	1410	O	TYR	A	248	43.208	29.191	18.792	1.00	19.19	A
ATOM	1411	N	VAL	A	249	43.523	31.114	17.673	1.00	20.20	A
ATOM	1412	CA	VAL	A	249	44.841	31.343	18.251	1.00	20.91	A
ATOM	1413	CB	VAL	A	249	45.542	32.532	17.570	1.00	21.18	A
ATOM	1414	CG1	VAL	A	249	46.821	32.896	18.317	1.00	22.45	A
ATOM	1415	CG2	VAL	A	249	45.862	32.170	16.139	1.00	24.01	A
ATOM	1416	C	VAL	A	249	44.764	31.606	19.750	1.00	21.52	A
ATOM	1417	O	VAL	A	249	43.915	32.368	20.216	1.00	22.72	A
ATOM	1418	N	SER	A	250	45.654	30.965	20.503	1.00	20.70	A
ATOM	1419	CA	SER	A	250	45.697	31.133	21.951	1.00	21.65	A
ATOM	1420	CB	SER	A	250	46.370	29.919	22.613	1.00	22.02	A
ATOM	1421	OG	SER	A	250	47.692	29.725	22.132	1.00	22.12	A
ATOM	1422	C	SER	A	250	46.476	32.402	22.280	1.00	22.13	A
ATOM	1423	O	SER	A	250	47.332	32.828	21.511	1.00	22.77	A
ATOM	1424	N	PRO	A	251	46.180	33.029	23.425	1.00	22.23	A
ATOM	1425	CD	PRO	A	251	45.163	32.684	24.433	1.00	22.97	A
ATOM	1426	CA	PRO	A	251	46.893	34.254	23.800	1.00	22.52	A
ATOM	1427	CB	PRO	A	251	46.233	34.650	25.127	1.00	23.06	A
ATOM	1428	CG	PRO	A	251	45.726	33.329	25.676	1.00	22.55	A
ATOM	1429	C	PRO	A	251	48.414	34.115	23.907	1.00	22.15	A
ATOM	1430	O	PRO	A	251	49.143	35.047	23.563	1.00	22.62	A
ATOM	1431	N	GLU	A	252	48.901	32.966	24.367	1.00	20.69	A
ATOM	1432	CA	GLU	A	252	50.347	32.772	24.500	1.00	21.40	A
ATOM	1433	CB	GLU	A	252	50.673	31.382	25.071	1.00	20.59	A

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ATOM   1434  CG  GLU A 252      49.993  30.232  24.352  1.00 21.91      A
ATOM   1435  CD  GLU A 252      48.691  29.822  25.014  1.00 21.51      A
ATOM   1436  OE1 GLU A 252      47.989  30.707  25.550  1.00 21.46      A
ATOM   1437  OE2 GLU A 252      48.367  28.613  24.993  1.00 20.23      A
ATOM   1438  C   GLU A 252      51.071  32.970  23.167  1.00 22.99      A
ATOM   1439  O   GLU A 252      52.191  33.480  23.136  1.00 23.17      A
ATOM   1440  N   LEU A 253      50.441  32.576  22.064  1.00 23.00      A
ATOM   1441  CA  LEU A 253      51.068  32.753  20.758  1.00 25.62      A
ATOM   1442  CB  LEU A 253      50.277  32.029  19.669  1.00 26.75      A
ATOM   1443  CG  LEU A 253      50.743  30.620  19.296  1.00 31.87      A
ATOM   1444  CD1 LEU A 253      50.433  29.651  20.422  1.00 31.81      A
ATOM   1445  CD2 LEU A 253      50.044  30.179  18.015  1.00 31.86      A
ATOM   1446  C   LEU A 253      51.201  34.228  20.371  1.00 26.94      A
ATOM   1447  O   LEU A 253      52.107  34.601  19.626  1.00 27.09      A
ATOM   1448  N   LEU A 254      50.297  35.059  20.877  1.00 25.83      A
ATOM   1449  CA  LEU A 254      50.297  36.485  20.564  1.00 27.26      A
ATOM   1450  CB  LEU A 254      48.858  37.006  20.564  1.00 25.84      A
ATOM   1451  CG  LEU A 254      47.882  36.290  19.621  1.00 24.69      A
ATOM   1452  CD1 LEU A 254      46.459  36.724  19.932  1.00 23.64      A
ATOM   1453  CD2 LEU A 254      48.236  36.597  18.177  1.00 24.24      A
ATOM   1454  C   LEU A 254      51.134  37.314  21.537  1.00 30.62      A
ATOM   1455  O   LEU A 254      51.633  38.383  21.187  1.00 32.35      A
ATOM   1456  N   THR A 255      51.292  36.821  22.758  1.00 32.47      A
ATOM   1457  CA  THR A 255      52.056  37.547  23.759  1.00 36.70      A
ATOM   1458  CB  THR A 255      51.368  37.478  25.127  1.00 34.51      A
ATOM   1459  OG1 THR A 255      51.188  36.106  25.494  1.00 35.49      A
ATOM   1460  CG2 THR A 255      50.013  38.166  25.077  1.00 33.40      A
ATOM   1461  C   THR A 255      53.477  37.035  23.910  1.00 40.09      A
ATOM   1462  O   THR A 255      54.430  37.793  23.772  1.00 43.69      A
ATOM   1463  N   GLU A 256      53.617  35.747  24.189  1.00 44.77      A
ATOM   1464  CA  GLU A 256      54.932  35.144  24.382  1.00 49.15      A
ATOM   1465  CB  GLU A 256      54.866  34.143  25.534  1.00 51.24      A
ATOM   1466  CG  GLU A 256      54.514  34.786  26.862  1.00 56.03      A
ATOM   1467  CD  GLU A 256      54.053  33.780  27.893  1.00 58.83      A
ATOM   1468  OE1 GLU A 256      54.766  32.776  28.107  1.00 62.13      A
ATOM   1469  OE2 GLU A 256      52.979  33.996  28.494  1.00 60.34      A
ATOM   1470  C   GLU A 256      55.475  34.456  23.137  1.00 50.09      A
ATOM   1471  O   GLU A 256      56.616  33.995  23.127  1.00 50.42      A
ATOM   1472  N   LYS A 257      54.658  34.389  22.090  1.00 51.21      A
ATOM   1473  CA  LYS A 257      55.064  33.746  20.845  1.00 51.22      A
ATOM   1474  CB  LYS A 257      56.244  34.502  20.227  1.00 53.28      A
ATOM   1475  CG  LYS A 257      56.558  34.125  18.790  1.00 55.19      A
ATOM   1476  CD  LYS A 257      57.709  34.961  18.253  1.00 57.52      A
ATOM   1477  CE  LYS A 257      57.952  34.694  16.777  1.00 58.52      A
ATOM   1478  NZ  LYS A 257      58.290  33.268  16.515  1.00 60.88      A
ATOM   1479  C   LYS A 257      55.467  32.302  21.138  1.00 50.74      A
ATOM   1480  O   LYS A 257      56.432  31.790  20.577  1.00 52.26      A
ATOM   1481  N   SER A 258      54.721  31.654  22.027  1.00 48.07      A
ATOM   1482  CA  SER A 258      54.999  30.273  22.402  1.00 46.87      A
ATOM   1483  CB  SER A 258      55.590  30.229  23.812  1.00 48.88      A
ATOM   1484  OG  SER A 258      54.741  30.892  24.734  1.00 53.14      A
ATOM   1485  C   SER A 258      53.735  29.415  22.342  1.00 44.07      A
ATOM   1486  O   SER A 258      52.617  29.932  22.417  1.00 44.17      A
ATOM   1487  N   ALA A 259      53.917  28.105  22.204  1.00 38.30      A
ATOM   1488  CA  ALA A 259      52.793  27.180  22.127  1.00 34.73      A
ATOM   1489  CB  ALA A 259      52.551  26.779  20.684  1.00 34.16      A
ATOM   1490  C   ALA A 259      53.042  25.940  22.977  1.00 32.34      A
ATOM   1491  O   ALA A 259      54.172  25.459  23.086  1.00 31.81      A
ATOM   1492  N   CYS A 260      51.975  25.428  23.579  1.00 28.58      A
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	ATOM	1493	CA	CYS	A	260	52.056	24.244	24.425	1.00	26.27	A
	ATOM	1494	CB	CYS	A	260	52.183	24.654	25.892	1.00	26.53	A
	ATOM	1495	SG	CYS	A	260	50.846	25.739	26.469	1.00	32.91	A
	ATOM	1496	C	CYS	A	260	50.786	23.435	24.224	1.00	22.83	A
5	ATOM	1497	O	CYS	A	260	49.892	23.856	23.495	1.00	22.14	A
	ATOM	1498	N	LYS	A	261	50.706	22.277	24.868	1.00	20.02	A
	ATOM	1499	CA	LYS	A	261	49.526	21.434	24.744	1.00	20.65	A
	ATOM	1500	CB	LYS	A	261	49.619	20.243	25.696	1.00	23.28	A
	ATOM	1501	CG	LYS	A	261	50.716	19.253	25.347	1.00	27.44	A
10	ATOM	1502	CD	LYS	A	261	50.732	18.117	26.350	1.00	29.98	A
	ATOM	1503	CE	LYS	A	261	51.922	17.203	26.134	1.00	32.34	A
	ATOM	1504	NZ	LYS	A	261	51.940	16.121	27.153	1.00	33.28	A
	ATOM	1505	C	LYS	A	261	48.268	22.229	25.062	1.00	19.20	A
	ATOM	1506	O	LYS	A	261	47.253	22.092	24.387	1.00	18.08	A
15	ATOM	1507	N	SER	A	262	48.358	23.068	26.089	1.00	16.92	A
	ATOM	1508	CA	SER	A	262	47.235	23.883	26.534	1.00	18.13	A
	ATOM	1509	CB	SER	A	262	47.644	24.698	27.770	1.00	18.27	A
	ATOM	1510	OG	SER	A	262	46.517	25.258	28.421	1.00	22.53	A
	ATOM	1511	C	SER	A	262	46.736	24.811	25.424	1.00	16.77	A
20	ATOM	1512	O	SER	A	262	45.591	25.254	25.450	1.00	15.69	A
	ATOM	1513	N	SER	A	263	47.595	25.118	24.456	1.00	16.44	A
	ATOM	1514	CA	SER	A	263	47.175	25.970	23.347	1.00	16.89	A
	ATOM	1515	CB	SER	A	263	48.340	26.228	22.382	1.00	18.49	A
	ATOM	1516	OG	SER	A	263	49.402	26.909	23.031	1.00	22.10	A
25	ATOM	1517	C	SER	A	263	46.040	25.257	22.612	1.00	17.79	A
	ATOM	1518	O	SER	A	263	45.099	25.898	22.148	1.00	17.57	A
	ATOM	1519	N	ASP	A	264	46.119	23.928	22.517	1.00	16.30	A
	ATOM	1520	CA	ASP	A	264	45.069	23.166	21.836	1.00	16.72	A
	ATOM	1521	CB	ASP	A	264	45.483	21.704	21.620	1.00	15.92	A
30	ATOM	1522	CG	ASP	A	264	46.544	21.539	20.548	1.00	17.93	A
	ATOM	1523	OD1	ASP	A	264	46.642	22.412	19.661	1.00	16.78	A
	ATOM	1524	OD2	ASP	A	264	47.265	20.515	20.579	1.00	16.64	A
	ATOM	1525	C	ASP	A	264	43.773	23.194	22.646	1.00	17.67	A
	ATOM	1526	O	ASP	A	264	42.681	23.197	22.076	1.00	18.27	A
35	ATOM	1527	N	LEU	A	265	43.898	23.205	23.974	1.00	15.49	A
	ATOM	1528	CA	LEU	A	265	42.730	23.232	24.849	1.00	14.75	A
	ATOM	1529	CB	LEU	A	265	43.147	23.038	26.313	1.00	11.38	A
	ATOM	1530	CG	LEU	A	265	43.711	21.641	26.621	1.00	14.04	A
	ATOM	1531	CD1	LEU	A	265	44.249	21.579	28.052	1.00	13.96	A
40	ATOM	1532	CD2	LEU	A	265	42.619	20.603	26.416	1.00	11.62	A
	ATOM	1533	C	LEU	A	265	41.999	24.557	24.675	1.00	15.13	A
	ATOM	1534	O	LEU	A	265	40.777	24.620	24.785	1.00	16.75	A
	ATOM	1535	N	TRP	A	266	42.746	25.622	24.405	1.00	16.08	A
	ATOM	1536	CA	TRP	A	266	42.118	26.918	24.184	1.00	16.96	A
45	ATOM	1537	CB	TRP	A	266	43.176	28.015	24.023	1.00	17.28	A
	ATOM	1538	CG	TRP	A	266	42.618	29.326	23.521	1.00	20.54	A
	ATOM	1539	CD2	TRP	A	266	42.313	30.490	24.301	1.00	20.07	A
	ATOM	1540	CE2	TRP	A	266	41.782	31.459	23.417	1.00	20.46	A
	ATOM	1541	CE3	TRP	A	266	42.435	30.810	25.660	1.00	20.68	A
50	ATOM	1542	CD1	TRP	A	266	42.270	29.631	22.231	1.00	19.53	A
	ATOM	1543	NE1	TRP	A	266	41.769	30.908	22.163	1.00	19.61	A
	ATOM	1544	CZ2	TRP	A	266	41.372	32.727	23.850	1.00	20.90	A
	ATOM	1545	CZ3	TRP	A	266	42.026	32.073	26.091	1.00	19.45	A
	ATOM	1546	CH2	TRP	A	266	41.501	33.015	25.185	1.00	20.71	A
55	ATOM	1547	C	TRP	A	266	41.284	26.795	22.913	1.00	17.22	A
	ATOM	1548	O	TRP	A	266	40.139	27.240	22.863	1.00	18.03	A
	ATOM	1549	N	ALA	A	267	41.863	26.181	21.886	1.00	17.50	A
	ATOM	1550	CA	ALA	A	267	41.155	25.990	20.626	1.00	16.16	A
	ATOM	1551	CB	ALA	A	267	42.050	25.290	19.621	1.00	14.28	A

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ATOM   1552  C   ALA A 267      39.901  25.159  20.891  1.00 16.28      A
ATOM   1553  O   ALA A 267      38.835  25.436  20.346  1.00 16.46      A
ATOM   1554  N   LEU A 268      40.031  24.144  21.739  1.00 16.57      A
ATOM   1555  CA  LEU A 268      38.890  23.299  22.084  1.00 17.03      A
ATOM   1556  CB  LEU A 268      39.292  22.260  23.139  1.00 15.35      A
ATOM   1557  CG  LEU A 268      38.158  21.429  23.754  1.00 19.00      A
ATOM   1558  CD1 LEU A 268      37.505  20.578  22.678  1.00 16.17      A
ATOM   1559  CD2 LEU A 268      38.718  20.537  24.881  1.00 17.49      A
ATOM   1560  C   LEU A 268      37.766  24.179  22.628  1.00 15.72      A
ATOM   1561  O   LEU A 268      36.603  24.031  22.247  1.00 15.28      A
ATOM   1562  N   GLY A 269      38.119  25.099  23.520  1.00 14.34      A
ATOM   1563  CA  GLY A 269      37.124  25.989  24.092  1.00 13.39      A
ATOM   1564  C   GLY A 269      36.406  26.808  23.031  1.00 14.94      A
ATOM   1565  O   GLY A 269      35.193  27.014  23.114  1.00 14.76      A
ATOM   1566  N   CYS A 270      37.146  27.279  22.030  1.00 13.86      A
ATOM   1567  CA  CYS A 270      36.539  28.061  20.958  1.00 16.80      A
ATOM   1568  CB  CYS A 270      37.611  28.634  20.023  1.00 15.97      A
ATOM   1569  SG  CYS A 270      38.751  29.810  20.780  1.00 20.48      A
ATOM   1570  C   CYS A 270      35.598  27.175  20.140  1.00 17.50      A
ATOM   1571  O   CYS A 270      34.516  27.604  19.741  1.00 18.38      A
ATOM   1572  N   ILE A 271      36.022  25.939  19.887  1.00 16.99      A
ATOM   1573  CA  ILE A 271      35.221  25.004  19.104  1.00 16.66      A
ATOM   1574  CB  ILE A 271      36.038  23.741  18.778  1.00 16.53      A
ATOM   1575  CG2 ILE A 271      35.155  22.694  18.102  1.00 16.34      A
ATOM   1576  CG1 ILE A 271      37.222  24.129  17.882  1.00 15.59      A
ATOM   1577  CD1 ILE A 271      38.239  23.018  17.690  1.00 14.88      A
ATOM   1578  C   ILE A 271      33.920  24.626  19.809  1.00 16.74      A
ATOM   1579  O   ILE A 271      32.865  24.576  19.179  1.00 17.12      A
ATOM   1580  N   ILE A 272      33.990  24.357  21.111  1.00 16.13      A
ATOM   1581  CA  ILE A 272      32.785  24.021  21.862  1.00 18.30      A
ATOM   1582  CB  ILE A 272      33.097  23.747  23.346  1.00 17.77      A
ATOM   1583  CG2 ILE A 272      31.796  23.666  24.152  1.00 17.96      A
ATOM   1584  CG1 ILE A 272      33.877  22.437  23.481  1.00 19.55      A
ATOM   1585  CD1 ILE A 272      34.446  22.217  24.886  1.00 18.64      A
ATOM   1586  C   ILE A 272      31.824  25.207  21.776  1.00 19.51      A
ATOM   1587  O   ILE A 272      30.624  25.037  21.554  1.00 20.44      A
ATOM   1588  N   TYR A 273      32.362  26.409  21.947  1.00 18.52      A
ATOM   1589  CA  TYR A 273      31.553  27.615  21.881  1.00 20.48      A
ATOM   1590  CB  TYR A 273      32.418  28.847  22.162  1.00 18.98      A
ATOM   1591  CG  TYR A 273      31.663  30.161  22.125  1.00 20.26      A
ATOM   1592  CD1 TYR A 273      31.229  30.709  20.916  1.00 20.67      A
ATOM   1593  CE1 TYR A 273      30.536  31.917  20.880  1.00 20.98      A
ATOM   1594  CD2 TYR A 273      31.383  30.857  23.302  1.00 19.82      A
ATOM   1595  CE2 TYR A 273      30.691  32.062  23.280  1.00 20.62      A
ATOM   1596  CZ  TYR A 273      30.271  32.587  22.067  1.00 21.15      A
ATOM   1597  OH  TYR A 273      29.588  33.776  22.049  1.00 21.86      A
ATOM   1598  C   TYR A 273      30.902  27.730  20.507  1.00 21.54      A
ATOM   1599  O   TYR A 273      29.719  28.049  20.401  1.00 22.80      A
ATOM   1600  N   GLN A 274      31.676  27.454  19.461  1.00 21.05      A
ATOM   1601  CA  GLN A 274      31.176  27.538  18.095  1.00 21.48      A
ATOM   1602  CB  GLN A 274      32.323  27.341  17.097  1.00 21.41      A
ATOM   1603  CG  GLN A 274      31.934  27.596  15.645  1.00 23.15      A
ATOM   1604  CD  GLN A 274      33.131  27.588  14.706  1.00 24.80      A
ATOM   1605  OE1 GLN A 274      34.276  27.446  15.139  1.00 22.51      A
ATOM   1606  NE2 GLN A 274      32.870  27.750  13.413  1.00 22.96      A
ATOM   1607  C   GLN A 274      30.076  26.517  17.828  1.00 21.51      A
ATOM   1608  O   GLN A 274      29.123  26.806  17.108  1.00 20.50      A
ATOM   1609  N   LEU A 275      30.207  25.324  18.403  1.00 21.44      A
ATOM   1610  CA  LEU A 275      29.196  24.282  18.208  1.00 20.95      A
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ATOM   1611  CB  LEU A 275      29.645  22.958  18.846  1.00 19.11      A
ATOM   1612  CG  LEU A 275      30.775  22.182  18.159  1.00 21.43      A
ATOM   1613  CD1 LEU A 275      31.118  20.936  18.963  1.00 17.64      A
ATOM   1614  CD2 LEU A 275      30.342  21.795  16.754  1.00 20.34      A
ATOM   1615  C   LEU A 275      27.860  24.697  18.815  1.00 21.32      A
ATOM   1616  O   LEU A 275      26.802  24.461  18.229  1.00 19.75      A
ATOM   1617  N   VAL A 276      27.921  25.322  19.987  1.00 19.10      A
ATOM   1618  CA  VAL A 276      26.724  25.750  20.702  1.00 22.47      A
ATOM   1619  CB  VAL A 276      27.011  25.882  22.217  1.00 20.87      A
ATOM   1620  CG1 VAL A 276      25.742  26.291  22.957  1.00 19.68      A
ATOM   1621  CG2 VAL A 276      27.550  24.558  22.766  1.00 19.43      A
ATOM   1622  C   VAL A 276      26.127  27.075  20.211  1.00 23.89      A
ATOM   1623  O   VAL A 276      24.910  27.199  20.070  1.00 24.90      A
ATOM   1624  N   ALA A 277      26.983  28.062  19.965  1.00 24.56      A
ATOM   1625  CA  ALA A 277      26.533  29.374  19.518  1.00 24.72      A
ATOM   1626  CB  ALA A 277      27.504  30.444  19.999  1.00 24.36      A
ATOM   1627  C   ALA A 277      26.378  29.458  18.005  1.00 25.76      A
ATOM   1628  O   ALA A 277      25.577  30.242  17.502  1.00 26.39      A
ATOM   1629  N   GLY A 278      27.142  28.651  17.280  1.00 25.13      A
ATOM   1630  CA  GLY A 278      27.062  28.673  15.834  1.00 25.58      A
ATOM   1631  C   GLY A 278      28.163  29.524  15.231  1.00 26.50      A
ATOM   1632  O   GLY A 278      28.374  29.510  14.015  1.00 28.17      A
ATOM   1633  N   LEU A 279      28.866  30.262  16.086  1.00 24.44      A
ATOM   1634  CA  LEU A 279      29.962  31.130  15.656  1.00 25.21      A
ATOM   1635  CB  LEU A 279      29.468  32.575  15.500  1.00 25.78      A
ATOM   1636  CG  LEU A 279      28.364  32.899  14.490  1.00 28.17      A
ATOM   1637  CD1 LEU A 279      27.922  34.344  14.684  1.00 26.60      A
ATOM   1638  CD2 LEU A 279      28.862  32.670  13.071  1.00 26.52      A
ATOM   1639  C   LEU A 279      31.093  31.116  16.687  1.00 23.47      A
ATOM   1640  O   LEU A 279      30.848  30.994  17.882  1.00 24.44      A
ATOM   1641  N   PRO A 280      32.349  31.239  16.236  1.00 23.35      A
ATOM   1642  CD  PRO A 280      32.831  31.404  14.855  1.00 22.26      A
ATOM   1643  CA  PRO A 280      33.464  31.239  17.189  1.00 23.81      A
ATOM   1644  CB  PRO A 280      34.692  31.293  16.282  1.00 23.24      A
ATOM   1645  CG  PRO A 280      34.189  32.020  15.073  1.00 24.89      A
ATOM   1646  C   PRO A 280      33.353  32.444  18.137  1.00 22.69      A
ATOM   1647  O   PRO A 280      32.750  33.457  17.788  1.00 22.11      A
ATOM   1648  N   PRO A 281      33.939  32.344  19.345  1.00 23.06      A
ATOM   1649  CD  PRO A 281      34.810  31.223  19.734  1.00 21.37      A
ATOM   1650  CA  PRO A 281      33.935  33.375  20.395  1.00 23.67      A
ATOM   1651  CB  PRO A 281      34.781  32.751  21.509  1.00 24.89      A
ATOM   1652  CG  PRO A 281      34.749  31.287  21.219  1.00 25.24      A
ATOM   1653  C   PRO A 281      34.481  34.752  20.017  1.00 23.75      A
ATOM   1654  O   PRO A 281      33.869  35.781  20.317  1.00 21.02      A
ATOM   1655  N   PHE A 282      35.644  34.763  19.379  1.00 22.17      A
ATOM   1656  CA  PHE A 282      36.293  36.007  18.998  1.00 23.16      A
ATOM   1657  CB  PHE A 282      37.765  35.943  19.406  1.00 21.01      A
ATOM   1658  CG  PHE A 282      37.975  35.482  20.822  1.00 22.66      A
ATOM   1659  CD1 PHE A 282      37.806  36.361  21.888  1.00 20.06      A
ATOM   1660  CD2 PHE A 282      38.291  34.151  21.093  1.00 20.72      A
ATOM   1661  CE1 PHE A 282      37.947  35.921  23.206  1.00 22.66      A
ATOM   1662  CE2 PHE A 282      38.433  33.702  22.405  1.00 20.97      A
ATOM   1663  CZ  PHE A 282      38.261  34.590  23.466  1.00 19.58      A
ATOM   1664  C   PHE A 282      36.169  36.263  17.503  1.00 24.39      A
ATOM   1665  O   PHE A 282      36.802  35.585  16.694  1.00 25.80      A
ATOM   1666  N   ARG A 283      35.355  37.248  17.142  1.00 24.99      A
ATOM   1667  CA  ARG A 283      35.141  37.594  15.741  1.00 26.33      A
ATOM   1668  CB  ARG A 283      33.721  37.209  15.316  1.00 28.91      A
ATOM   1669  CG  ARG A 283      33.293  35.808  15.724  1.00 30.27      A
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	ATOM	1670	CD	ARG	A	283	31.904	35.493	15.188	1.00	33.36	A
	ATOM	1671	NE	ARG	A	283	30.890	36.392	15.733	1.00	32.76	A
	ATOM	1672	CZ	ARG	A	283	30.372	36.287	16.952	1.00	34.79	A
	ATOM	1673	NH1	ARG	A	283	30.767	35.317	17.768	1.00	35.77	A
5	ATOM	1674	NH2	ARG	A	283	29.458	37.156	17.359	1.00	36.12	A
	ATOM	1675	C	ARG	A	283	35.328	39.096	15.544	1.00	26.47	A
	ATOM	1676	O	ARG	A	283	35.029	39.888	16.438	1.00	26.28	A
	ATOM	1677	N	ALA	A	284	35.818	39.486	14.373	1.00	26.70	A
	ATOM	1678	CA	ALA	A	284	36.033	40.899	14.079	1.00	27.84	A
10	ATOM	1679	CB	ALA	A	284	37.188	41.442	14.914	1.00	26.24	A
	ATOM	1680	C	ALA	A	284	36.327	41.077	12.602	1.00	28.35	A
	ATOM	1681	O	ALA	A	284	36.560	40.101	11.891	1.00	29.91	A
	ATOM	1682	N	GLY	A	285	36.332	42.329	12.153	1.00	29.29	A
	ATOM	1683	CA	GLY	A	285	36.577	42.631	10.753	1.00	29.52	A
15	ATOM	1684	C	GLY	A	285	37.893	42.156	10.168	1.00	30.12	A
	ATOM	1685	O	GLY	A	285	37.974	41.862	8.976	1.00	30.60	A
	ATOM	1686	N	ASN	A	286	38.939	42.097	10.983	1.00	28.49	A
	ATOM	1687	CA	ASN	A	286	40.231	41.644	10.489	1.00	26.71	A
	ATOM	1688	CB	ASN	A	286	41.050	42.825	9.945	1.00	26.11	A
20	ATOM	1689	CG	ASN	A	286	41.310	43.900	10.990	1.00	27.83	A
	ATOM	1690	OD1	ASN	A	286	41.877	43.631	12.049	1.00	27.84	A
	ATOM	1691	ND2	ASN	A	286	40.908	45.131	10.685	1.00	25.95	A
	ATOM	1692	C	ASN	A	286	40.997	40.924	11.584	1.00	26.03	A
	ATOM	1693	O	ASN	A	286	40.540	40.851	12.723	1.00	25.66	A
25	ATOM	1694	N	GLU	A	287	42.162	40.391	11.239	1.00	24.81	A
	ATOM	1695	CA	GLU	A	287	42.965	39.662	12.206	1.00	27.59	A
	ATOM	1696	CB	GLU	A	287	44.145	38.985	11.510	1.00	30.17	A
	ATOM	1697	CG	GLU	A	287	43.776	37.632	10.931	1.00	38.21	A
	ATOM	1698	CD	GLU	A	287	44.900	36.998	10.140	1.00	41.86	A
30	ATOM	1699	OE1	GLU	A	287	46.061	37.036	10.608	1.00	43.08	A
	ATOM	1700	OE2	GLU	A	287	44.612	36.449	9.052	1.00	45.22	A
	ATOM	1701	C	GLU	A	287	43.459	40.485	13.383	1.00	25.05	A
	ATOM	1702	O	GLU	A	287	43.382	40.030	14.521	1.00	26.41	A
	ATOM	1703	N	TYR	A	288	43.966	41.685	13.122	1.00	23.04	A
35	ATOM	1704	CA	TYR	A	288	44.460	42.528	14.205	1.00	22.34	A
	ATOM	1705	CB	TYR	A	288	44.867	43.913	13.691	1.00	21.07	A
	ATOM	1706	CG	TYR	A	288	45.275	44.858	14.805	1.00	21.07	A
	ATOM	1707	CD1	TYR	A	288	46.533	44.762	15.405	1.00	21.23	A
	ATOM	1708	CE1	TYR	A	288	46.891	45.588	16.475	1.00	20.43	A
40	ATOM	1709	CD2	TYR	A	288	44.380	45.809	15.302	1.00	22.32	A
	ATOM	1710	CE2	TYR	A	288	44.725	46.637	16.373	1.00	23.28	A
	ATOM	1711	CZ	TYR	A	288	45.981	46.518	16.953	1.00	22.96	A
	ATOM	1712	OH	TYR	A	288	46.316	47.313	18.024	1.00	23.18	A
	ATOM	1713	C	TYR	A	288	43.402	42.698	15.288	1.00	21.38	A
45	ATOM	1714	O	TYR	A	288	43.710	42.616	16.473	1.00	22.09	A
	ATOM	1715	N	LEU	A	289	42.159	42.939	14.874	1.00	21.88	A
	ATOM	1716	CA	LEU	A	289	41.055	43.130	15.811	1.00	21.98	A
	ATOM	1717	CB	LEU	A	289	39.821	43.673	15.078	1.00	22.90	A
	ATOM	1718	CG	LEU	A	289	39.896	45.130	14.601	1.00	26.52	A
50	ATOM	1719	CD1	LEU	A	289	38.706	45.436	13.696	1.00	26.55	A
	ATOM	1720	CD2	LEU	A	289	39.914	46.071	15.807	1.00	23.13	A
	ATOM	1721	C	LEU	A	289	40.686	41.849	16.560	1.00	21.24	A
	ATOM	1722	O	LEU	A	289	40.256	41.897	17.715	1.00	20.72	A
	ATOM	1723	N	ILE	A	290	40.843	40.708	15.900	1.00	19.62	A
55	ATOM	1724	CA	ILE	A	290	40.538	39.433	16.533	1.00	18.54	A
	ATOM	1725	CB	ILE	A	290	40.560	38.281	15.509	1.00	18.52	A
	ATOM	1726	CG2	ILE	A	290	40.503	36.934	16.234	1.00	17.63	A
	ATOM	1727	CG1	ILE	A	290	39.378	38.429	14.545	1.00	18.88	A
	ATOM	1728	CD1	ILE	A	290	39.421	37.483	13.357	1.00	19.81	A

	ATOM	1729	C	ILE	A	290	41.578	39.167	17.618	1.00	19.09	A
	ATOM	1730	O	ILE	A	290	41.236	38.788	18.737	1.00	18.20	A
	ATOM	1731	N	PHE	A	291	42.849	39.376	17.286	1.00	18.76	A
	ATOM	1732	CA	PHE	A	291	43.925	39.156	18.247	1.00	20.75	A
5	ATOM	1733	CB	PHE	A	291	45.286	39.434	17.606	1.00	20.71	A
	ATOM	1734	CG	PHE	A	291	45.644	38.480	16.503	1.00	22.92	A
	ATOM	1735	CD1	PHE	A	291	45.065	37.214	16.443	1.00	22.98	A
	ATOM	1736	CD2	PHE	A	291	46.588	38.830	15.543	1.00	22.91	A
	ATOM	1737	CE1	PHE	A	291	45.423	36.310	15.440	1.00	24.51	A
10	ATOM	1738	CE2	PHE	A	291	46.954	37.931	14.535	1.00	25.54	A
	ATOM	1739	CZ	PHE	A	291	46.370	36.670	14.485	1.00	23.29	A
	ATOM	1740	C	PHE	A	291	43.739	40.061	19.451	1.00	21.72	A
	ATOM	1741	O	PHE	A	291	43.992	39.671	20.593	1.00	22.32	A
	ATOM	1742	N	GLN	A	292	43.284	41.275	19.178	1.00	23.27	A
15	ATOM	1743	CA	GLN	A	292	43.055	42.264	20.216	1.00	24.01	A
	ATOM	1744	CB	GLN	A	292	42.574	43.559	19.562	1.00	25.77	A
	ATOM	1745	CG	GLN	A	292	42.577	44.773	20.447	1.00	28.45	A
	ATOM	1746	CD	GLN	A	292	42.469	46.057	19.638	1.00	29.83	A
	ATOM	1747	OE1	GLN	A	292	41.520	46.244	18.872	1.00	27.16	A
20	ATOM	1748	NE2	GLN	A	292	43.449	46.944	19.799	1.00	27.61	A
	ATOM	1749	C	GLN	A	292	42.018	41.733	21.204	1.00	22.97	A
	ATOM	1750	O	GLN	A	292	42.200	41.832	22.415	1.00	21.64	A
	ATOM	1751	N	LYS	A	293	40.937	41.154	20.687	1.00	21.82	A
	ATOM	1752	CA	LYS	A	293	39.895	40.612	21.558	1.00	22.18	A
25	ATOM	1753	CB	LYS	A	293	38.664	40.223	20.740	1.00	22.69	A
	ATOM	1754	CG	LYS	A	293	37.919	41.407	20.153	1.00	25.78	A
	ATOM	1755	CD	LYS	A	293	36.651	40.961	19.429	1.00	27.88	A
	ATOM	1756	CE	LYS	A	293	35.857	42.161	18.926	1.00	30.85	A
	ATOM	1757	NZ	LYS	A	293	34.612	41.750	18.214	1.00	32.98	A
30	ATOM	1758	C	LYS	A	293	40.398	39.398	22.343	1.00	21.20	A
	ATOM	1759	O	LYS	A	293	40.041	39.204	23.509	1.00	22.01	A
	ATOM	1760	N	ILE	A	294	41.226	38.583	21.702	1.00	19.91	A
	ATOM	1761	CA	ILE	A	294	41.774	37.394	22.347	1.00	20.28	A
	ATOM	1762	CB	ILE	A	294	42.631	36.575	21.349	1.00	18.98	A
35	ATOM	1763	CG2	ILE	A	294	43.481	35.550	22.098	1.00	17.70	A
	ATOM	1764	CG1	ILE	A	294	41.716	35.897	20.318	1.00	17.93	A
	ATOM	1765	CD1	ILE	A	294	42.467	35.237	19.178	1.00	16.21	A
	ATOM	1766	C	ILE	A	294	42.618	37.727	23.587	1.00	21.94	A
	ATOM	1767	O	ILE	A	294	42.366	37.199	24.673	1.00	20.86	A
40	ATOM	1768	N	ILE	A	295	43.610	38.600	23.439	1.00	21.88	A
	ATOM	1769	CA	ILE	A	295	44.461	38.934	24.582	1.00	24.25	A
	ATOM	1770	CB	ILE	A	295	45.668	39.805	24.175	1.00	23.93	A
	ATOM	1771	CG2	ILE	A	295	46.514	39.066	23.140	1.00	24.61	A
	ATOM	1772	CG1	ILE	A	295	45.189	41.151	23.637	1.00	24.58	A
45	ATOM	1773	CD1	ILE	A	295	46.317	42.149	23.433	1.00	26.69	A
	ATOM	1774	C	ILE	A	295	43.720	39.636	25.717	1.00	24.80	A
	ATOM	1775	O	ILE	A	295	44.214	39.687	26.842	1.00	24.76	A
	ATOM	1776	N	LYS	A	296	42.539	40.173	25.425	1.00	25.33	A
	ATOM	1777	CA	LYS	A	296	41.743	40.853	26.444	1.00	26.80	A
50	ATOM	1778	CB	LYS	A	296	41.178	42.170	25.894	1.00	27.39	A
	ATOM	1779	CG	LYS	A	296	42.240	43.141	25.413	1.00	31.79	A
	ATOM	1780	CD	LYS	A	296	41.634	44.410	24.826	1.00	35.56	A
	ATOM	1781	CE	LYS	A	296	41.009	45.283	25.900	1.00	39.29	A
	ATOM	1782	NZ	LYS	A	296	40.564	46.603	25.357	1.00	41.72	A
55	ATOM	1783	C	LYS	A	296	40.593	39.958	26.893	1.00	25.50	A
	ATOM	1784	O	LYS	A	296	39.770	40.361	27.713	1.00	24.02	A
	ATOM	1785	N	LEU	A	297	40.550	38.742	26.349	1.00	25.67	A
	ATOM	1786	CA	LEU	A	297	39.500	37.777	26.666	1.00	25.16	A
	ATOM	1787	CB	LEU	A	297	39.632	37.285	28.111	1.00	24.80	A

	ATOM	1788	CG	LEU	A	297	38.766	36.068	28.460	1.00	26.43	A
	ATOM	1789	CD1	LEU	A	297	39.238	34.852	27.646	1.00	26.70	A
	ATOM	1790	CD2	LEU	A	297	38.856	35.777	29.951	1.00	24.84	A
	ATOM	1791	C	LEU	A	297	38.151	38.459	26.467	1.00	25.11	A
5	ATOM	1792	O	LEU	A	297	37.261	38.378	27.309	1.00	25.28	A
	ATOM	1793	N	GLU	A	298	38.007	39.127	25.331	1.00	24.98	A
	ATOM	1794	CA	GLU	A	298	36.786	39.847	25.023	1.00	25.31	A
	ATOM	1795	CB	GLU	A	298	37.143	41.139	24.291	1.00	27.13	A
	ATOM	1796	CG	GLU	A	298	35.991	42.092	24.108	1.00	31.28	A
10	ATOM	1797	CD	GLU	A	298	36.419	43.362	23.410	1.00	34.40	A
	ATOM	1798	OE1	GLU	A	298	37.348	44.027	23.918	1.00	35.90	A
	ATOM	1799	OE2	GLU	A	298	35.832	43.693	22.359	1.00	36.16	A
	ATOM	1800	C	GLU	A	298	35.766	39.057	24.207	1.00	23.79	A
	ATOM	1801	O	GLU	A	298	35.832	39.017	22.979	1.00	24.35	A
15	ATOM	1802	N	TYR	A	299	34.825	38.427	24.902	1.00	23.45	A
	ATOM	1803	CA	TYR	A	299	33.760	37.663	24.265	1.00	23.98	A
	ATOM	1804	CB	TYR	A	299	34.264	36.304	23.755	1.00	20.13	A
	ATOM	1805	CG	TYR	A	299	34.348	35.233	24.828	1.00	21.17	A
	ATOM	1806	CD1	TYR	A	299	35.336	35.279	25.810	1.00	19.32	A
20	ATOM	1807	CE1	TYR	A	299	35.389	34.332	26.826	1.00	19.30	A
	ATOM	1808	CD2	TYR	A	299	33.410	34.201	24.888	1.00	18.96	A
	ATOM	1809	CE2	TYR	A	299	33.456	33.243	25.907	1.00	19.41	A
	ATOM	1810	CZ	TYR	A	299	34.449	33.321	26.870	1.00	18.79	A
	ATOM	1811	OH	TYR	A	299	34.511	32.401	27.881	1.00	18.77	A
25	ATOM	1812	C	TYR	A	299	32.699	37.437	25.331	1.00	25.20	A
	ATOM	1813	O	TYR	A	299	32.942	37.681	26.506	1.00	26.46	A
	ATOM	1814	N	ASP	A	300	31.522	36.981	24.927	1.00	26.94	A
	ATOM	1815	CA	ASP	A	300	30.467	36.710	25.891	1.00	30.60	A
	ATOM	1816	CB	ASP	A	300	29.665	37.981	26.179	1.00	35.86	A
30	ATOM	1817	CG	ASP	A	300	29.228	38.687	24.923	1.00	42.04	A
	ATOM	1818	OD1	ASP	A	300	28.450	38.088	24.149	1.00	45.98	A
	ATOM	1819	OD2	ASP	A	300	29.666	39.840	24.707	1.00	45.69	A
	ATOM	1820	C	ASP	A	300	29.564	35.608	25.363	1.00	29.26	A
	ATOM	1821	O	ASP	A	300	29.590	35.299	24.172	1.00	28.64	A
35	ATOM	1822	N	PHE	A	301	28.778	35.011	26.253	1.00	28.96	A
	ATOM	1823	CA	PHE	A	301	27.884	33.924	25.871	1.00	30.48	A
	ATOM	1824	CB	PHE	A	301	27.818	32.854	26.968	1.00	29.17	A
	ATOM	1825	CG	PHE	A	301	29.147	32.279	27.356	1.00	29.29	A
	ATOM	1826	CD1	PHE	A	301	29.978	32.949	28.245	1.00	27.31	A
40	ATOM	1827	CD2	PHE	A	301	29.560	31.050	26.845	1.00	27.89	A
	ATOM	1828	CE1	PHE	A	301	31.205	32.403	28.625	1.00	28.83	A
	ATOM	1829	CE2	PHE	A	301	30.781	30.498	27.217	1.00	28.05	A
	ATOM	1830	CZ	PHE	A	301	31.605	31.175	28.110	1.00	28.27	A
	ATOM	1831	C	PHE	A	301	26.459	34.384	25.619	1.00	32.20	A
45	ATOM	1832	O	PHE	A	301	25.946	35.261	26.317	1.00	32.36	A
	ATOM	1833	N	PRO	A	302	25.798	33.804	24.607	1.00	33.29	A
	ATOM	1834	CD	PRO	A	302	26.313	32.943	23.529	1.00	34.04	A
	ATOM	1835	CA	PRO	A	302	24.415	34.199	24.341	1.00	35.24	A
	ATOM	1836	CB	PRO	A	302	24.144	33.608	22.959	1.00	34.01	A
50	ATOM	1837	CG	PRO	A	302	25.041	32.413	22.921	1.00	35.48	A
	ATOM	1838	C	PRO	A	302	23.567	33.561	25.444	1.00	37.39	A
	ATOM	1839	O	PRO	A	302	23.935	32.518	25.986	1.00	38.49	A
	ATOM	1840	N	ALA	A	303	22.447	34.188	25.783	1.00	39.36	A
	ATOM	1841	CA	ALA	A	303	21.572	33.692	26.843	1.00	40.65	A
55	ATOM	1842	CB	ALA	A	303	20.280	34.506	26.862	1.00	41.66	A
	ATOM	1843	C	ALA	A	303	21.238	32.197	26.814	1.00	41.25	A
	ATOM	1844	O	ALA	A	303	21.253	31.537	27.854	1.00	43.16	A
	ATOM	1845	N	ALA	A	304	20.945	31.665	25.631	1.00	41.04	A
	ATOM	1846	CA	ALA	A	304	20.569	30.258	25.480	1.00	40.66	A

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ATOM   1847  CB  ALA A 304      20.121  30.004  24.040  1.00 41.36      A
ATOM   1848  C   ALA A 304      21.628  29.223  25.876  1.00 39.61      A
ATOM   1849  O   ALA A 304      21.298  28.156  26.395  1.00 40.61      A
ATOM   1850  N   PHE A 305      22.891  29.543  25.617  1.00 36.21      A
ATOM   1851  CA  PHE A 305      24.022  28.662  25.909  1.00 32.08      A
ATOM   1852  CB  PHE A 305      25.259  29.519  26.187  1.00 29.46      A
ATOM   1853  CG  PHE A 305      26.536  28.917  25.690  1.00 28.15      A
ATOM   1854  CD1 PHE A 305      27.146  27.875  26.377  1.00 26.20      A
ATOM   1855  CD2 PHE A 305      27.127  29.386  24.521  1.00 27.05      A
ATOM   1856  CE1 PHE A 305      28.330  27.308  25.908  1.00 26.92      A
ATOM   1857  CE2 PHE A 305      28.312  28.826  24.042  1.00 26.62      A
ATOM   1858  CZ  PHE A 305      28.914  27.786  24.737  1.00 26.61      A
ATOM   1859  C   PHE A 305      23.811  27.664  27.057  1.00 30.09      A
ATOM   1860  O   PHE A 305      23.518  28.051  28.187  1.00 31.51      A
ATOM   1861  N   PHE A 306      23.964  26.378  26.758  1.00 27.01      A
ATOM   1862  CA  PHE A 306      23.801  25.334  27.769  1.00 26.30      A
ATOM   1863  CB  PHE A 306      24.157  23.970  27.170  1.00 25.03      A
ATOM   1864  CG  PHE A 306      23.548  23.725  25.815  1.00 27.24      A
ATOM   1865  CD1 PHE A 306      22.170  23.831  25.622  1.00 28.40      A
ATOM   1866  CD2 PHE A 306      24.350  23.386  24.728  1.00 27.84      A
ATOM   1867  CE1 PHE A 306      21.601  23.603  24.365  1.00 28.05      A
ATOM   1868  CE2 PHE A 306      23.792  23.155  23.465  1.00 28.31      A
ATOM   1869  CZ  PHE A 306      22.415  23.263  23.283  1.00 28.00      A
ATOM   1870  C   PHE A 306      24.711  25.652  28.961  1.00 26.23      A
ATOM   1871  O   PHE A 306      25.927  25.775  28.811  1.00 25.59      A
ATOM   1872  N   PRO A 307      24.125  25.796  30.163  1.00 26.67      A
ATOM   1873  CD  PRO A 307      22.685  25.625  30.430  1.00 27.95      A
ATOM   1874  CA  PRO A 307      24.842  26.110  31.405  1.00 26.59      A
ATOM   1875  CB  PRO A 307      23.795  25.832  32.481  1.00 26.14      A
ATOM   1876  CG  PRO A 307      22.531  26.250  31.803  1.00 27.86      A
ATOM   1877  C   PRO A 307      26.145  25.355  31.659  1.00 25.58      A
ATOM   1878  O   PRO A 307      27.189  25.964  31.900  1.00 22.65      A
ATOM   1879  N   LYS A 308      26.085  24.031  31.620  1.00 24.46      A
ATOM   1880  CA  LYS A 308      27.274  23.232  31.867  1.00 23.91      A
ATOM   1881  CB  LYS A 308      26.887  21.760  32.024  1.00 23.25      A
ATOM   1882  CG  LYS A 308      26.062  21.532  33.285  1.00 28.49      A
ATOM   1883  CD  LYS A 308      25.618  20.093  33.466  1.00 30.17      A
ATOM   1884  CE  LYS A 308      24.760  19.973  34.722  1.00 33.12      A
ATOM   1885  NZ  LYS A 308      24.122  18.636  34.860  1.00 34.13      A
ATOM   1886  C   LYS A 308      28.314  23.426  30.769  1.00 22.84      A
ATOM   1887  O   LYS A 308      29.514  23.411  31.042  1.00 22.46      A
ATOM   1888  N   ALA A 309      27.861  23.621  29.534  1.00 21.59      A
ATOM   1889  CA  ALA A 309      28.792  23.848  28.432  1.00 20.02      A
ATOM   1890  CB  ALA A 309      28.056  23.856  27.106  1.00 18.80      A
ATOM   1891  C   ALA A 309      29.481  25.191  28.662  1.00 21.41      A
ATOM   1892  O   ALA A 309      30.680  25.335  28.427  1.00 21.39      A
ATOM   1893  N   ARG A 310      28.717  26.179  29.121  1.00 21.39      A
ATOM   1894  CA  ARG A 310      29.290  27.494  29.388  1.00 22.02      A
ATOM   1895  CB  ARG A 310      28.213  28.479  29.854  1.00 22.39      A
ATOM   1896  CG  ARG A 310      28.806  29.756  30.436  1.00 25.30      A
ATOM   1897  CD  ARG A 310      27.780  30.852  30.664  1.00 28.33      A
ATOM   1898  NE  ARG A 310      28.420  32.039  31.230  1.00 30.18      A
ATOM   1899  CZ  ARG A 310      27.901  33.263  31.203  1.00 32.07      A
ATOM   1900  NH1 ARG A 310      26.719  33.477  30.634  1.00 31.19      A
ATOM   1901  NH2 ARG A 310      28.567  34.277  31.742  1.00 30.49      A
ATOM   1902  C   ARG A 310      30.376  27.388  30.458  1.00 21.65      A
ATOM   1903  O   ARG A 310      31.464  27.949  30.311  1.00 20.36      A
ATOM   1904  N   ASP A 311      30.074  26.677  31.541  1.00 19.57      A
ATOM   1905  CA  ASP A 311      31.043  26.512  32.615  1.00 20.18      A
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	ATOM	1906	CB	ASP	A	311	30.460	25.649	33.739	1.00	20.39	A
	ATOM	1907	CG	ASP	A	311	31.439	25.446	34.881	1.00	23.35	A
	ATOM	1908	OD1	ASP	A	311	32.158	24.428	34.885	1.00	24.91	A
	ATOM	1909	OD2	ASP	A	311	31.500	26.312	35.776	1.00	26.96	A
5	ATOM	1910	C	ASP	A	311	32.322	25.877	32.073	1.00	19.73	A
	ATOM	1911	O	ASP	A	311	33.422	26.289	32.439	1.00	19.30	A
	ATOM	1912	N	LEU	A	312	32.179	24.891	31.188	1.00	16.32	A
	ATOM	1913	CA	LEU	A	312	33.349	24.226	30.611	1.00	16.66	A
	ATOM	1914	CB	LEU	A	312	32.927	23.035	29.744	1.00	16.12	A
10	ATOM	1915	CG	LEU	A	312	34.050	22.320	28.974	1.00	14.73	A
	ATOM	1916	CD1	LEU	A	312	35.192	21.935	29.912	1.00	14.56	A
	ATOM	1917	CD2	LEU	A	312	33.477	21.084	28.289	1.00	14.22	A
	ATOM	1918	C	LEU	A	312	34.181	25.189	29.774	1.00	16.61	A
	ATOM	1919	O	LEU	A	312	35.402	25.241	29.910	1.00	16.20	A
15	ATOM	1920	N	VAL	A	313	33.515	25.949	28.908	1.00	16.20	A
	ATOM	1921	CA	VAL	A	313	34.207	26.907	28.058	1.00	15.37	A
	ATOM	1922	CB	VAL	A	313	33.216	27.648	27.130	1.00	16.42	A
	ATOM	1923	CG1	VAL	A	313	33.915	28.796	26.426	1.00	16.93	A
	ATOM	1924	CG2	VAL	A	313	32.644	26.672	26.103	1.00	17.88	A
20	ATOM	1925	C	VAL	A	313	34.960	27.923	28.911	1.00	17.39	A
	ATOM	1926	O	VAL	A	313	36.093	28.294	28.591	1.00	18.00	A
	ATOM	1927	N	GLU	A	314	34.342	28.364	30.004	1.00	17.61	A
	ATOM	1928	CA	GLU	A	314	34.986	29.331	30.885	1.00	20.43	A
	ATOM	1929	CB	GLU	A	314	34.009	29.816	31.959	1.00	22.14	A
25	ATOM	1930	CG	GLU	A	314	32.800	30.550	31.396	1.00	26.52	A
	ATOM	1931	CD	GLU	A	314	31.852	31.025	32.478	1.00	31.26	A
	ATOM	1932	OE1	GLU	A	314	31.580	30.246	33.417	1.00	33.48	A
	ATOM	1933	OE2	GLU	A	314	31.370	32.173	32.387	1.00	34.81	A
	ATOM	1934	C	GLU	A	314	36.217	28.721	31.539	1.00	19.15	A
30	ATOM	1935	O	GLU	A	314	37.134	29.433	31.934	1.00	21.47	A
	ATOM	1936	N	LYS	A	315	36.245	27.400	31.651	1.00	19.51	A
	ATOM	1937	CA	LYS	A	315	37.394	26.749	32.258	1.00	19.17	A
	ATOM	1938	CB	LYS	A	315	36.946	25.514	33.043	1.00	18.84	A
	ATOM	1939	CG	LYS	A	315	36.280	25.885	34.368	1.00	19.62	A
35	ATOM	1940	CD	LYS	A	315	35.653	24.696	35.073	1.00	19.22	A
	ATOM	1941	CE	LYS	A	315	35.070	25.095	36.427	1.00	21.00	A
	ATOM	1942	NZ	LYS	A	315	36.119	25.552	37.381	1.00	19.53	A
	ATOM	1943	C	LYS	A	315	38.452	26.393	31.218	1.00	18.96	A
	ATOM	1944	O	LYS	A	315	39.511	25.873	31.561	1.00	19.85	A
40	ATOM	1945	N	LEU	A	316	38.164	26.691	29.950	1.00	17.08	A
	ATOM	1946	CA	LEU	A	316	39.102	26.429	28.854	1.00	16.41	A
	ATOM	1947	CB	LEU	A	316	38.414	25.636	27.738	1.00	13.81	A
	ATOM	1948	CG	LEU	A	316	38.028	24.201	28.115	1.00	14.39	A
	ATOM	1949	CD1	LEU	A	316	37.139	23.597	27.031	1.00	12.38	A
45	ATOM	1950	CD2	LEU	A	316	39.302	23.373	28.309	1.00	12.77	A
	ATOM	1951	C	LEU	A	316	39.652	27.743	28.290	1.00	17.12	A
	ATOM	1952	O	LEU	A	316	40.851	27.860	28.023	1.00	16.53	A
	ATOM	1953	N	LEU	A	317	38.780	28.729	28.105	1.00	16.27	A
	ATOM	1954	CA	LEU	A	317	39.228	30.022	27.596	1.00	17.52	A
50	ATOM	1955	CB	LEU	A	317	38.083	30.752	26.887	1.00	16.37	A
	ATOM	1956	CG	LEU	A	317	37.448	29.973	25.727	1.00	18.81	A
	ATOM	1957	CD1	LEU	A	317	36.415	30.851	25.018	1.00	16.47	A
	ATOM	1958	CD2	LEU	A	317	38.528	29.526	24.741	1.00	17.87	A
	ATOM	1959	C	LEU	A	317	39.745	30.841	28.774	1.00	18.27	A
55	ATOM	1960	O	LEU	A	317	39.078	31.753	29.273	1.00	18.58	A
	ATOM	1961	N	VAL	A	318	40.937	30.475	29.229	1.00	18.02	A
	ATOM	1962	CA	VAL	A	318	41.593	31.141	30.342	1.00	18.85	A
	ATOM	1963	CB	VAL	A	318	41.846	30.153	31.500	1.00	19.91	A
	ATOM	1964	CG1	VAL	A	318	42.590	30.848	32.634	1.00	20.01	A

	ATOM	1965	CG2	VAL	A	318	40.520	29.584	31.990	1.00	19.44	A
	ATOM	1966	C	VAL	A	318	42.923	31.657	29.811	1.00	19.67	A
	ATOM	1967	O	VAL	A	318	43.690	30.902	29.208	1.00	18.26	A
	ATOM	1968	N	LEU	A	319	43.197	32.939	30.028	1.00	20.07	A
5	ATOM	1969	CA	LEU	A	319	44.436	33.533	29.538	1.00	20.98	A
	ATOM	1970	CB	LEU	A	319	44.521	35.002	29.968	1.00	21.64	A
	ATOM	1971	CG	LEU	A	319	43.418	35.908	29.408	1.00	24.38	A
	ATOM	1972	CD1	LEU	A	319	43.606	37.332	29.935	1.00	23.28	A
	ATOM	1973	CD2	LEU	A	319	43.453	35.887	27.875	1.00	24.33	A
10	ATOM	1974	C	LEU	A	319	45.680	32.774	29.994	1.00	20.38	A
	ATOM	1975	O	LEU	A	319	46.568	32.496	29.192	1.00	21.34	A
	ATOM	1976	N	ASP	A	320	45.742	32.440	31.280	1.00	20.22	A
	ATOM	1977	CA	ASP	A	320	46.879	31.707	31.833	1.00	20.90	A
	ATOM	1978	CB	ASP	A	320	46.842	31.760	33.365	1.00	20.76	A
15	ATOM	1979	CG	ASP	A	320	48.049	31.102	34.004	1.00	21.51	A
	ATOM	1980	OD1	ASP	A	320	48.669	30.226	33.367	1.00	23.46	A
	ATOM	1981	OD2	ASP	A	320	48.371	31.450	35.159	1.00	23.89	A
	ATOM	1982	C	ASP	A	320	46.814	30.247	31.367	1.00	20.06	A
	ATOM	1983	O	ASP	A	320	45.988	29.476	31.840	1.00	20.54	A
20	ATOM	1984	N	ALA	A	321	47.700	29.876	30.451	1.00	20.68	A
	ATOM	1985	CA	ALA	A	321	47.733	28.522	29.903	1.00	22.04	A
	ATOM	1986	CB	ALA	A	321	48.860	28.411	28.881	1.00	20.75	A
	ATOM	1987	C	ALA	A	321	47.858	27.400	30.940	1.00	21.62	A
	ATOM	1988	O	ALA	A	321	47.482	26.259	30.665	1.00	21.99	A
25	ATOM	1989	N	THR	A	322	48.372	27.715	32.127	1.00	20.89	A
	ATOM	1990	CA	THR	A	322	48.531	26.698	33.167	1.00	20.82	A
	ATOM	1991	CB	THR	A	322	49.670	27.051	34.146	1.00	19.47	A
	ATOM	1992	OG1	THR	A	322	49.341	28.253	34.848	1.00	20.19	A
	ATOM	1993	CG2	THR	A	322	50.981	27.249	33.394	1.00	21.59	A
30	ATOM	1994	C	THR	A	322	47.264	26.498	33.983	1.00	19.55	A
	ATOM	1995	O	THR	A	322	47.235	25.673	34.894	1.00	21.13	A
	ATOM	1996	N	LYS	A	323	46.216	27.248	33.661	1.00	19.33	A
	ATOM	1997	CA	LYS	A	323	44.962	27.122	34.392	1.00	21.20	A
	ATOM	1998	CB	LYS	A	323	44.580	28.460	35.030	1.00	23.75	A
35	ATOM	1999	CG	LYS	A	323	45.562	28.933	36.084	1.00	28.45	A
	ATOM	2000	CD	LYS	A	323	45.055	30.177	36.799	1.00	33.76	A
	ATOM	2001	CE	LYS	A	323	46.087	30.678	37.802	1.00	36.15	A
	ATOM	2002	NZ	LYS	A	323	46.532	29.569	38.693	1.00	37.34	A
	ATOM	2003	C	LYS	A	323	43.806	26.614	33.539	1.00	20.68	A
40	ATOM	2004	O	LYS	A	323	42.649	26.757	33.915	1.00	20.42	A
	ATOM	2005	N	ARG	A	324	44.114	26.019	32.392	1.00	19.97	A
	ATOM	2006	CA	ARG	A	324	43.060	25.494	31.531	1.00	17.98	A
	ATOM	2007	CB	ARG	A	324	43.461	25.609	30.061	1.00	15.95	A
	ATOM	2008	CG	ARG	A	324	43.534	27.050	29.603	1.00	17.34	A
45	ATOM	2009	CD	ARG	A	324	43.996	27.194	28.172	1.00	19.80	A
	ATOM	2010	NE	ARG	A	324	44.438	28.565	27.944	1.00	16.93	A
	ATOM	2011	CZ	ARG	A	324	45.410	28.908	27.108	1.00	19.88	A
	ATOM	2012	NH1	ARG	A	324	46.045	27.978	26.398	1.00	14.58	A
	ATOM	2013	NH2	ARG	A	324	45.774	30.181	27.015	1.00	16.51	A
50	ATOM	2014	C	ARG	A	324	42.762	24.046	31.883	1.00	18.32	A
	ATOM	2015	O	ARG	A	324	43.673	23.222	32.006	1.00	18.20	A
	ATOM	2016	N	LEU	A	325	41.479	23.748	32.055	1.00	18.32	A
	ATOM	2017	CA	LEU	A	325	41.050	22.403	32.395	1.00	17.79	A
	ATOM	2018	CB	LEU	A	325	39.523	22.335	32.425	1.00	17.03	A
55	ATOM	2019	CG	LEU	A	325	38.896	21.125	33.116	1.00	15.91	A
	ATOM	2020	CD1	LEU	A	325	39.392	21.048	34.557	1.00	15.93	A
	ATOM	2021	CD2	LEU	A	325	37.375	21.255	33.084	1.00	16.56	A
	ATOM	2022	C	LEU	A	325	41.599	21.433	31.356	1.00	18.68	A
	ATOM	2023	O	LEU	A	325	41.347	21.586	30.157	1.00	18.28	A

	ATOM	2024	N	GLY	A	326	42.354	20.439	31.821	1.00	18.18	A
	ATOM	2025	CA	GLY	A	326	42.931	19.462	30.915	1.00	16.36	A
	ATOM	2026	C	GLY	A	326	44.443	19.558	30.807	1.00	19.15	A
	ATOM	2027	O	GLY	A	326	45.093	18.592	30.404	1.00	19.52	A
5	ATOM	2028	N	CYS	A	327	45.016	20.708	31.161	1.00	18.16	A
	ATOM	2029	CA	CYS	A	327	46.463	20.867	31.075	1.00	19.30	A
	ATOM	2030	CB	CYS	A	327	46.856	22.350	31.058	1.00	20.22	A
	ATOM	2031	SG	CYS	A	327	46.782	23.200	32.649	1.00	21.97	A
	ATOM	2032	C	CYS	A	327	47.169	20.157	32.228	1.00	20.22	A
10	ATOM	2033	O	CYS	A	327	46.561	19.828	33.246	1.00	17.92	A
	ATOM	2034	N	GLU	A	328	48.463	19.933	32.053	1.00	20.51	A
	ATOM	2035	CA	GLU	A	328	49.274	19.244	33.042	1.00	23.34	A
	ATOM	2036	CB	GLU	A	328	50.710	19.139	32.507	1.00	28.68	A
	ATOM	2037	CG	GLU	A	328	50.754	18.367	31.175	1.00	38.24	A
15	ATOM	2038	CD	GLU	A	328	52.067	18.500	30.414	1.00	43.23	A
	ATOM	2039	OE1	GLU	A	328	52.535	19.643	30.218	1.00	46.22	A
	ATOM	2040	OE2	GLU	A	328	52.618	17.459	29.991	1.00	44.90	A
	ATOM	2041	C	GLU	A	328	49.234	19.876	34.435	1.00	22.11	A
	ATOM	2042	O	GLU	A	328	49.147	19.161	35.437	1.00	20.27	A
20	ATOM	2043	N	GLU	A	329	49.276	21.204	34.506	1.00	18.40	A
	ATOM	2044	CA	GLU	A	329	49.248	21.875	35.801	1.00	20.13	A
	ATOM	2045	CB	GLU	A	329	49.587	23.363	35.657	1.00	20.36	A
	ATOM	2046	CG	GLU	A	329	51.014	23.651	35.190	1.00	24.05	A
	ATOM	2047	CD	GLU	A	329	51.191	23.518	33.688	1.00	25.93	A
25	ATOM	2048	OE1	GLU	A	329	50.213	23.154	32.995	1.00	26.61	A
	ATOM	2049	OE2	GLU	A	329	52.311	23.781	33.198	1.00	27.19	A
	ATOM	2050	C	GLU	A	329	47.890	21.718	36.480	1.00	19.36	A
	ATOM	2051	O	GLU	A	329	47.775	21.879	37.694	1.00	18.74	A
	ATOM	2052	N	MET	A	330	46.863	21.415	35.691	1.00	17.28	A
30	ATOM	2053	CA	MET	A	330	45.520	21.220	36.229	1.00	16.38	A
	ATOM	2054	CB	MET	A	330	44.474	21.833	35.294	1.00	17.65	A
	ATOM	2055	CG	MET	A	330	44.460	23.365	35.311	1.00	22.95	A
	ATOM	2056	SD	MET	A	330	44.186	24.026	36.979	1.00	26.78	A
	ATOM	2057	CE	MET	A	330	42.435	23.712	37.186	1.00	24.69	A
35	ATOM	2058	C	MET	A	330	45.257	19.730	36.422	1.00	14.30	A
	ATOM	2059	O	MET	A	330	44.127	19.304	36.629	1.00	15.39	A
	ATOM	2060	N	GLU	A	331	46.327	18.949	36.346	1.00	15.60	A
	ATOM	2061	CA	GLU	A	331	46.289	17.501	36.531	1.00	17.08	A
	ATOM	2062	CB	GLU	A	331	45.607	17.155	37.862	1.00	17.00	A
40	ATOM	2063	CG	GLU	A	331	46.070	18.027	39.038	1.00	17.46	A
	ATOM	2064	CD	GLU	A	331	47.591	18.179	39.145	1.00	20.16	A
	ATOM	2065	OE1	GLU	A	331	48.034	19.073	39.896	1.00	21.39	A
	ATOM	2066	OE2	GLU	A	331	48.345	17.420	38.500	1.00	18.87	A
	ATOM	2067	C	GLU	A	331	45.697	16.658	35.398	1.00	17.80	A
45	ATOM	2068	O	GLU	A	331	45.107	15.602	35.636	1.00	20.40	A
	ATOM	2069	N	GLY	A	332	45.844	17.133	34.167	1.00	16.23	A
	ATOM	2070	CA	GLY	A	332	45.420	16.353	33.015	1.00	14.10	A
	ATOM	2071	C	GLY	A	332	43.982	16.154	32.596	1.00	13.54	A
	ATOM	2072	O	GLY	A	332	43.063	16.864	33.017	1.00	11.96	A
50	ATOM	2073	N	TYR	A	333	43.804	15.141	31.750	1.00	14.37	A
	ATOM	2074	CA	TYR	A	333	42.510	14.806	31.182	1.00	13.56	A
	ATOM	2075	CB	TYR	A	333	42.722	13.892	29.968	1.00	15.00	A
	ATOM	2076	CG	TYR	A	333	43.153	14.683	28.752	1.00	16.46	A
	ATOM	2077	CD1	TYR	A	333	42.206	15.172	27.849	1.00	15.29	A
55	ATOM	2078	CE1	TYR	A	333	42.573	16.002	26.794	1.00	13.42	A
	ATOM	2079	CD2	TYR	A	333	44.490	15.039	28.561	1.00	14.91	A
	ATOM	2080	CE2	TYR	A	333	44.872	15.877	27.499	1.00	14.87	A
	ATOM	2081	CZ	TYR	A	333	43.902	16.353	26.626	1.00	15.61	A
	ATOM	2082	OH	TYR	A	333	44.244	17.197	25.599	1.00	17.29	A

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ATOM   2083  C   TYR A 333      41.470  14.230  32.127  1.00 15.23      A
ATOM   2084  O   TYR A 333      40.278  14.323  31.846  1.00 16.63      A
ATOM   2085  N   GLY A 334      41.907  13.650  33.244  1.00 15.50      A
ATOM   2086  CA  GLY A 334      40.957  13.100  34.202  1.00 15.07      A
ATOM   2087  C   GLY A 334      39.925  14.146  34.616  1.00 16.40      A
ATOM   2088  O   GLY A 334      38.724  13.946  34.433  1.00 15.05      A
ATOM   2089  N   PRO A 335      40.366  15.278  35.184  1.00 14.96      A
ATOM   2090  CD  PRO A 335      41.727  15.531  35.689  1.00 15.88      A
ATOM   2091  CA  PRO A 335      39.444  16.339  35.606  1.00 15.29      A
ATOM   2092  CB  PRO A 335      40.383  17.397  36.178  1.00 13.19      A
ATOM   2093  CG  PRO A 335      41.485  16.569  36.758  1.00 13.81      A
ATOM   2094  C   PRO A 335      38.594  16.877  34.448  1.00 15.84      A
ATOM   2095  O   PRO A 335      37.423  17.204  34.631  1.00 14.84      A
ATOM   2096  N   LEU A 336      39.184  16.971  33.257  1.00 16.12      A
ATOM   2097  CA  LEU A 336      38.450  17.465  32.094  1.00 15.52      A
ATOM   2098  CB  LEU A 336      39.396  17.653  30.898  1.00 14.39      A
ATOM   2099  CG  LEU A 336      38.770  17.991  29.538  1.00 15.46      A
ATOM   2100  CD1 LEU A 336      37.836  19.182  29.662  1.00 11.25      A
ATOM   2101  CD2 LEU A 336      39.884  18.285  28.528  1.00 14.11      A
ATOM   2102  C   LEU A 336      37.321  16.508  31.714  1.00 16.28      A
ATOM   2103  O   LEU A 336      36.176  16.921  31.540  1.00 15.51      A
ATOM   2104  N   LYS A 337      37.640  15.225  31.592  1.00 17.22      A
ATOM   2105  CA  LYS A 337      36.624  14.243  31.235  1.00 17.39      A
ATOM   2106  CB  LYS A 337      37.293  12.900  30.921  1.00 17.68      A
ATOM   2107  CG  LYS A 337      38.170  12.994  29.676  1.00 22.31      A
ATOM   2108  CD  LYS A 337      39.213  11.892  29.592  1.00 24.60      A
ATOM   2109  CE  LYS A 337      38.620  10.560  29.189  1.00 24.76      A
ATOM   2110  NZ  LYS A 337      39.710   9.560  28.997  1.00 25.05      A
ATOM   2111  C   LYS A 337      35.577  14.096  32.342  1.00 17.33      A
ATOM   2112  O   LYS A 337      34.456  13.652  32.090  1.00 14.42      A
ATOM   2113  N   ALA A 338      35.928  14.500  33.559  1.00 15.83      A
ATOM   2114  CA  ALA A 338      34.989  14.395  34.674  1.00 17.52      A
ATOM   2115  CB  ALA A 338      35.749  14.167  35.980  1.00 19.68      A
ATOM   2116  C   ALA A 338      34.095  15.621  34.804  1.00 18.83      A
ATOM   2117  O   ALA A 338      33.252  15.687  35.695  1.00 18.94      A
ATOM   2118  N   HIS A 339      34.262  16.596  33.918  1.00 19.42      A
ATOM   2119  CA  HIS A 339      33.438  17.796  34.004  1.00 19.28      A
ATOM   2120  CB  HIS A 339      33.865  18.819  32.949  1.00 19.20      A
ATOM   2121  CG  HIS A 339      33.163  20.134  33.074  1.00 20.26      A
ATOM   2122  CD2 HIS A 339      33.549  21.299  33.649  1.00 18.95      A
ATOM   2123  ND1 HIS A 339      31.880  20.340  32.612  1.00 19.10      A
ATOM   2124  CE1 HIS A 339      31.506  21.576  32.896  1.00 22.19      A
ATOM   2125  NE2 HIS A 339      32.500  22.179  33.525  1.00 21.98      A
ATOM   2126  C   HIS A 339      31.957  17.448  33.845  1.00 19.13      A
ATOM   2127  O   HIS A 339      31.597  16.576  33.061  1.00 19.52      A
ATOM   2128  N   PRO A 340      31.079  18.125  34.606  1.00 19.80      A
ATOM   2129  CD  PRO A 340      31.424  19.119  35.640  1.00 19.08      A
ATOM   2130  CA  PRO A 340      29.630  17.900  34.569  1.00 20.52      A
ATOM   2131  CB  PRO A 340      29.091  19.058  35.396  1.00 20.74      A
ATOM   2132  CG  PRO A 340      30.146  19.207  36.454  1.00 19.20      A
ATOM   2133  C   PRO A 340      29.000  17.834  33.176  1.00 21.42      A
ATOM   2134  O   PRO A 340      28.049  17.088  32.955  1.00 22.48      A
ATOM   2135  N   PHE A 341      29.528  18.606  32.237  1.00 21.33      A
ATOM   2136  CA  PHE A 341      28.985  18.610  30.886  1.00 21.57      A
ATOM   2137  CB  PHE A 341      29.739  19.624  30.017  1.00 21.64      A
ATOM   2138  CG  PHE A 341      29.207  19.740  28.613  1.00 23.18      A
ATOM   2139  CD1 PHE A 341      27.903  20.171  28.382  1.00 22.58      A
ATOM   2140  CD2 PHE A 341      30.013  19.431  27.522  1.00 21.95      A
ATOM   2141  CE1 PHE A 341      27.410  20.292  27.082  1.00 23.54      A
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	ATOM	2142	CE2	PHE	A	341	29.533	19.548	26.220	1.00	21.83	A
	ATOM	2143	CZ	PHE	A	341	28.228	19.980	25.998	1.00	23.23	A
	ATOM	2144	C	PHE	A	341	29.055	17.226	30.237	1.00	21.84	A
	ATOM	2145	O	PHE	A	341	28.232	16.896	29.389	1.00	20.37	A
5	ATOM	2146	N	PHE	A	342	30.034	16.422	30.640	1.00	20.51	A
	ATOM	2147	CA	PHE	A	342	30.221	15.085	30.077	1.00	23.01	A
	ATOM	2148	CB	PHE	A	342	31.710	14.809	29.850	1.00	18.00	A
	ATOM	2149	CG	PHE	A	342	32.398	15.812	28.971	1.00	17.05	A
	ATOM	2150	CD1	PHE	A	342	32.010	15.987	27.652	1.00	17.78	A
10	ATOM	2151	CD2	PHE	A	342	33.487	16.534	29.450	1.00	15.72	A
	ATOM	2152	CE1	PHE	A	342	32.702	16.867	26.811	1.00	18.08	A
	ATOM	2153	CE2	PHE	A	342	34.184	17.414	28.617	1.00	17.45	A
	ATOM	2154	CZ	PHE	A	342	33.790	17.578	27.298	1.00	16.56	A
	ATOM	2155	C	PHE	A	342	29.679	13.972	30.976	1.00	24.95	A
15	ATOM	2156	O	PHE	A	342	30.002	12.798	30.777	1.00	23.95	A
	ATOM	2157	N	GLU	A	343	28.861	14.333	31.958	1.00	27.35	A
	ATOM	2158	CA	GLU	A	343	28.325	13.349	32.897	1.00	30.28	A
	ATOM	2159	CB	GLU	A	343	27.187	13.964	33.716	1.00	32.20	A
	ATOM	2160	CG	GLU	A	343	26.581	12.991	34.714	1.00	39.71	A
20	ATOM	2161	CD	GLU	A	343	25.628	13.661	35.688	1.00	44.72	A
	ATOM	2162	OE1	GLU	A	343	24.661	14.314	35.234	1.00	47.55	A
	ATOM	2163	OE2	GLU	A	343	25.847	13.526	36.911	1.00	46.89	A
	ATOM	2164	C	GLU	A	343	27.852	12.017	32.305	1.00	28.98	A
	ATOM	2165	O	GLU	A	343	28.225	10.952	32.800	1.00	31.73	A
25	ATOM	2166	N	SER	A	344	27.037	12.067	31.258	1.00	26.09	A
	ATOM	2167	CA	SER	A	344	26.520	10.838	30.656	1.00	28.36	A
	ATOM	2168	CB	SER	A	344	25.129	11.089	30.067	1.00	28.73	A
	ATOM	2169	OG	SER	A	344	25.203	11.942	28.940	1.00	30.91	A
	ATOM	2170	C	SER	A	344	27.407	10.214	29.577	1.00	27.66	A
30	ATOM	2171	O	SER	A	344	26.987	9.281	28.900	1.00	28.66	A
	ATOM	2172	N	VAL	A	345	28.627	10.715	29.419	1.00	26.75	A
	ATOM	2173	CA	VAL	A	345	29.534	10.183	28.402	1.00	23.44	A
	ATOM	2174	CB	VAL	A	345	30.565	11.256	27.950	1.00	23.10	A
	ATOM	2175	CG1	VAL	A	345	31.589	10.631	26.995	1.00	22.24	A
35	ATOM	2176	CG2	VAL	A	345	29.854	12.418	27.275	1.00	20.05	A
	ATOM	2177	C	VAL	A	345	30.326	8.957	28.855	1.00	24.26	A
	ATOM	2178	O	VAL	A	345	30.876	8.930	29.960	1.00	22.83	A
	ATOM	2179	N	THR	A	346	30.374	7.942	27.997	1.00	21.77	A
	ATOM	2180	CA	THR	A	346	31.153	6.740	28.272	1.00	23.70	A
40	ATOM	2181	CB	THR	A	346	30.391	5.455	27.857	1.00	26.53	A
	ATOM	2182	OG1	THR	A	346	29.248	5.284	28.706	1.00	29.98	A
	ATOM	2183	CG2	THR	A	346	31.289	4.231	27.990	1.00	24.28	A
	ATOM	2184	C	THR	A	346	32.383	6.945	27.385	1.00	23.43	A
	ATOM	2185	O	THR	A	346	32.306	6.827	26.160	1.00	24.50	A
45	ATOM	2186	N	TRP	A	347	33.508	7.270	28.013	1.00	22.98	A
	ATOM	2187	CA	TRP	A	347	34.744	7.569	27.300	1.00	23.81	A
	ATOM	2188	CB	TRP	A	347	35.683	8.352	28.219	1.00	22.54	A
	ATOM	2189	CG	TRP	A	347	35.128	9.658	28.693	1.00	20.61	A
	ATOM	2190	CD2	TRP	A	347	35.257	10.927	28.040	1.00	19.11	A
50	ATOM	2191	CE2	TRP	A	347	34.581	11.881	28.838	1.00	18.39	A
	ATOM	2192	CE3	TRP	A	347	35.878	11.351	26.858	1.00	18.16	A
	ATOM	2193	CD1	TRP	A	347	34.397	9.883	29.828	1.00	18.35	A
	ATOM	2194	NE1	TRP	A	347	34.065	11.218	29.923	1.00	19.51	A
	ATOM	2195	CZ2	TRP	A	347	34.510	13.234	28.491	1.00	16.88	A
55	ATOM	2196	CZ3	TRP	A	347	35.808	12.701	26.511	1.00	17.23	A
	ATOM	2197	CH2	TRP	A	347	35.127	13.624	27.327	1.00	18.16	A
	ATOM	2198	C	TRP	A	347	35.538	6.429	26.675	1.00	25.79	A
	ATOM	2199	O	TRP	A	347	36.304	6.654	25.742	1.00	24.67	A
	ATOM	2200	N	ALA	A	348	35.360	5.215	27.183	1.00	27.10	A

	ATOM	2201	CA	ALA	A	348	36.116	4.063	26.697	1.00	27.46	A
	ATOM	2202	CB	ALA	A	348	35.899	2.869	27.636	1.00	27.09	A
	ATOM	2203	C	ALA	A	348	35.895	3.620	25.256	1.00	27.18	A
	ATOM	2204	O	ALA	A	348	36.830	3.148	24.613	1.00	29.41	A
5	ATOM	2205	N	ASN	A	349	34.682	3.769	24.735	1.00	26.55	A
	ATOM	2206	CA	ASN	A	349	34.418	3.310	23.375	1.00	27.28	A
	ATOM	2207	CB	ASN	A	349	33.700	1.962	23.444	1.00	29.37	A
	ATOM	2208	CG	ASN	A	349	32.299	2.088	24.013	1.00	30.92	A
	ATOM	2209	OD1	ASN	A	349	32.045	2.942	24.859	1.00	30.17	A
10	ATOM	2210	ND2	ASN	A	349	31.386	1.237	23.553	1.00	33.52	A
	ATOM	2211	C	ASN	A	349	33.599	4.265	22.509	1.00	26.47	A
	ATOM	2212	O	ASN	A	349	32.669	3.843	21.819	1.00	25.87	A
	ATOM	2213	N	LEU	A	350	33.947	5.543	22.518	1.00	24.45	A
	ATOM	2214	CA	LEU	A	350	33.203	6.510	21.721	1.00	23.14	A
15	ATOM	2215	CB	LEU	A	350	33.837	7.898	21.848	1.00	23.22	A
	ATOM	2216	CG	LEU	A	350	33.659	8.605	23.191	1.00	21.05	A
	ATOM	2217	CD1	LEU	A	350	34.646	9.756	23.293	1.00	19.36	A
	ATOM	2218	CD2	LEU	A	350	32.220	9.094	23.319	1.00	18.78	A
	ATOM	2219	C	LEU	A	350	33.082	6.152	20.240	1.00	22.60	A
20	ATOM	2220	O	LEU	A	350	32.011	6.296	19.650	1.00	21.15	A
	ATOM	2221	N	HIS	A	351	34.165	5.689	19.627	1.00	23.13	A
	ATOM	2222	CA	HIS	A	351	34.089	5.387	18.204	1.00	27.83	A
	ATOM	2223	CB	HIS	A	351	35.506	5.325	17.596	1.00	29.36	A
	ATOM	2224	CG	HIS	A	351	36.082	3.950	17.493	1.00	32.07	A
25	ATOM	2225	CD2	HIS	A	351	36.611	3.128	18.431	1.00	32.39	A
	ATOM	2226	ND1	HIS	A	351	36.197	3.285	16.291	1.00	33.02	A
	ATOM	2227	CE1	HIS	A	351	36.775	2.113	16.493	1.00	33.58	A
	ATOM	2228	NE2	HIS	A	351	37.036	1.992	17.782	1.00	31.76	A
	ATOM	2229	C	HIS	A	351	33.258	4.144	17.874	1.00	28.12	A
30	ATOM	2230	O	HIS	A	351	33.015	3.847	16.707	1.00	29.49	A
	ATOM	2231	N	GLN	A	352	32.800	3.442	18.908	1.00	29.28	A
	ATOM	2232	CA	GLN	A	352	31.963	2.255	18.726	1.00	29.67	A
	ATOM	2233	CB	GLN	A	352	32.366	1.145	19.694	1.00	30.56	A
	ATOM	2234	CG	GLN	A	352	33.169	0.041	19.041	1.00	30.88	A
35	ATOM	2235	CD	GLN	A	352	34.493	-0.186	19.729	1.00	31.21	A
	ATOM	2236	OE1	GLN	A	352	34.541	-0.450	20.928	1.00	30.76	A
	ATOM	2237	NE2	GLN	A	352	35.578	-0.084	18.971	1.00	32.30	A
	ATOM	2238	C	GLN	A	352	30.504	2.638	18.963	1.00	30.42	A
	ATOM	2239	O	GLN	A	352	29.595	1.831	18.770	1.00	29.01	A
40	ATOM	2240	N	GLN	A	353	30.290	3.875	19.397	1.00	27.64	A
	ATOM	2241	CA	GLN	A	353	28.948	4.365	19.652	1.00	27.42	A
	ATOM	2242	CB	GLN	A	353	28.977	5.401	20.775	1.00	25.77	A
	ATOM	2243	CG	GLN	A	353	29.408	4.837	22.115	1.00	27.34	A
	ATOM	2244	CD	GLN	A	353	29.638	5.914	23.156	1.00	27.19	A
45	ATOM	2245	OE1	GLN	A	353	28.875	6.872	23.252	1.00	28.29	A
	ATOM	2246	NE2	GLN	A	353	30.687	5.753	23.951	1.00	28.79	A
	ATOM	2247	C	GLN	A	353	28.375	4.989	18.385	1.00	29.00	A
	ATOM	2248	O	GLN	A	353	29.118	5.455	17.516	1.00	29.14	A
	ATOM	2249	N	THR	A	354	27.053	4.984	18.276	1.00	27.31	A
50	ATOM	2250	CA	THR	A	354	26.390	5.568	17.119	1.00	27.85	A
	ATOM	2251	CB	THR	A	354	24.991	4.941	16.904	1.00	30.69	A
	ATOM	2252	OG1	THR	A	354	25.132	3.532	16.665	1.00	30.07	A
	ATOM	2253	CG2	THR	A	354	24.289	5.585	15.709	1.00	29.58	A
	ATOM	2254	C	THR	A	354	26.244	7.062	17.376	1.00	26.85	A
55	ATOM	2255	O	THR	A	354	25.592	7.475	18.329	1.00	25.77	A
	ATOM	2256	N	PRO	A	355	26.867	7.898	16.533	1.00	27.22	A
	ATOM	2257	CD	PRO	A	355	27.792	7.588	15.431	1.00	25.89	A
	ATOM	2258	CA	PRO	A	355	26.763	9.346	16.734	1.00	27.23	A
	ATOM	2259	CB	PRO	A	355	27.625	9.915	15.609	1.00	24.91	A

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ATOM   2260  CG  PRO A 355      28.643   8.838  15.385  1.00 25.54      A
ATOM   2261  C   PRO A 355      25.322   9.837  16.641  1.00 28.07      A
ATOM   2262  O   PRO A 355      24.548   9.364  15.810  1.00 27.24      A
ATOM   2263  N   PRO A 356      24.941  10.792  17.500  1.00 28.28      A
ATOM   2264  CD  PRO A 356      25.752  11.560  18.462  1.00 28.31      A
ATOM   2265  CA  PRO A 356      23.572  11.306  17.448  1.00 28.44      A
ATOM   2266  CB  PRO A 356      23.539  12.301  18.604  1.00 28.11      A
ATOM   2267  CG  PRO A 356      24.946  12.832  18.612  1.00 26.86      A
ATOM   2268  C   PRO A 356      23.363  11.978  16.097  1.00 29.25      A
ATOM   2269  O   PRO A 356      24.304  12.537  15.529  1.00 27.27      A
ATOM   2270  N   ALA A 357      22.143  11.910  15.575  1.00 30.45      A
ATOM   2271  CA  ALA A 357      21.848  12.521  14.287  1.00 32.81      A
ATOM   2272  CB  ALA A 357      20.507  12.019  13.757  1.00 31.99      A
ATOM   2273  C   ALA A 357      21.824  14.035  14.448  1.00 35.05      A
ATOM   2274  O   ALA A 357      21.194  14.561  15.369  1.00 35.04      A
ATOM   2275  N   LEU A 358      22.516  14.730  13.552  1.00 37.81      A
ATOM   2276  CA  LEU A 358      22.578  16.185  13.597  1.00 42.15      A
ATOM   2277  CB  LEU A 358      23.679  16.681  12.658  1.00 39.54      A
ATOM   2278  CG  LEU A 358      25.086  16.285  13.109  1.00 39.51      A
ATOM   2279  CD1 LEU A 358      26.102  16.686  12.062  1.00 39.29      A
ATOM   2280  CD2 LEU A 358      25.395  16.953  14.445  1.00 40.01      A
ATOM   2281  C   LEU A 358      21.241  16.837  13.242  1.00 45.91      A
ATOM   2282  O   LEU A 358      20.874  16.927  12.069  1.00 45.71      A
ATOM   2283  N   THR A 359      20.530  17.290  14.275  1.00 50.06      A
ATOM   2284  CA  THR A 359      19.223  17.939  14.140  1.00 53.73      A
ATOM   2285  CB  THR A 359      19.353  19.428  13.726  1.00 54.04      A
ATOM   2286  OG1 THR A 359      19.995  19.521  12.448  1.00 56.35      A
ATOM   2287  CG2 THR A 359      20.158  20.204  14.763  1.00 54.32      A
ATOM   2288  C   THR A 359      18.309  17.236  13.139  1.00 54.47      A
ATOM   2289  O   THR A 359      18.483  16.016  12.930  1.00 55.90      A
ATOM   2290  OXT THR A 359      17.407  17.908  12.595  1.00 56.97      A
TER
ATOM      1  CB  PRO B  71      99.838  54.646  -7.659  1.00 20.00      6
ATOM      2  CG  PRO B  71      99.216  55.105  -6.341  1.00 20.00      6
ATOM      3  C   PRO B  71      98.903  54.776  -9.981  1.00 20.00      6
ATOM      4  O   PRO B  71      98.022  53.925 -10.109  1.00 20.00      8
ATOM      5  N   PRO B  71      97.782  55.851  -8.042  1.00 20.00      7
ATOM      6  CD  PRO B  71      97.728  55.323  -6.668  1.00 20.00      6
ATOM      7  CA  PRO B  71      99.087  55.515  -8.658  1.00 20.00      6
ATOM      8  N   PRO B  72      99.732  55.097 -10.985  1.00 20.00      7
ATOM      9  CD  PRO B  72     100.794  56.121 -10.977  1.00 20.00      6
ATOM     10  CA  PRO B  72      99.645  54.451 -12.297  1.00 20.00      6
ATOM     11  CB  PRO B  72     100.885  54.973 -13.017  1.00 20.00      6
ATOM     12  CG  PRO B  72     101.026  56.352 -12.456  1.00 20.00      6
ATOM     13  C   PRO B  72      99.627  52.924 -12.202  1.00 20.00      6
ATOM     14  O   PRO B  72     100.246  52.338 -11.314  1.00 20.00      8
ATOM     15  N   ALA B  73      98.906  52.293 -13.122  1.00 20.00      7
ATOM     16  CA  ALA B  73      98.805  50.840 -13.167  1.00 20.00      6
ATOM     17  CB  ALA B  73      97.420  50.392 -12.710  1.00 20.00      6
ATOM     18  C   ALA B  73      99.053  50.398 -14.604  1.00 20.00      6
ATOM     19  O   ALA B  73      99.027  51.215 -15.526  1.00 20.00      8
ATOM     20  N   PRO B  74      99.313  49.100 -14.818  1.00 20.00      7
ATOM     21  CD  PRO B  74      99.473  47.995 -13.857  1.00 20.00      6
ATOM     22  CA  PRO B  74      99.553  48.642 -16.189  1.00 20.00      6
ATOM     23  CB  PRO B  74      99.700  47.132 -16.023  1.00 20.00      6
ATOM     24  CG  PRO B  74     100.292  47.004 -14.649  1.00 20.00      6
ATOM     25  C   PRO B  74      98.371  49.018 -17.079  1.00 20.00      6
ATOM     26  O   PRO B  74      97.279  49.296 -16.583  1.00 20.00      8
ATOM     27  N   ALA B  75      98.589  49.037 -18.389  1.00 20.00      7
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ATOM     28  CA  ALA B  75      97.516  49.368 -19.321  1.00 20.00   6
ATOM     29  CB  ALA B  75      98.061  49.462 -20.745  1.00 20.00   6
ATOM     30  C   ALA B  75      96.446  48.285 -19.246  1.00 20.00   6
ATOM     31  O   ALA B  75      96.745  47.126 -18.961  1.00 20.00   8
ATOM     32  N   LYS B  76      95.200  48.666 -19.494  1.00 20.00   7
ATOM     33  CA  LYS B  76      94.098  47.716 -19.463  1.00 20.00   6
ATOM     34  CB  LYS B  76      92.793  48.431 -19.805  1.00 20.00   6
ATOM     35  CG  LYS B  76      91.546  47.792 -19.225  1.00 20.00   6
ATOM     36  CD  LYS B  76      91.511  47.932 -17.711  1.00 20.00   6
ATOM     37  CE  LYS B  76      90.184  47.454 -17.152  1.00 20.00   6
ATOM     38  NZ  LYS B  76      90.108  47.606 -15.673  1.00 20.00   7
ATOM     39  C   LYS B  76      94.389  46.645 -20.513  1.00 20.00   6
ATOM     40  O   LYS B  76      94.736  46.968 -21.645  1.00 20.00   8
ATOM     41  N   LYS B  77      94.269  45.374 -20.145  1.00 20.00   7
ATOM     42  CA  LYS B  77      94.525  44.311 -21.107  1.00 20.00   6
ATOM     43  CB  LYS B  77      94.875  43.008 -20.384  1.00 20.00   6
ATOM     44  CG  LYS B  77      96.117  43.125 -19.506  1.00 20.00   6
ATOM     45  CD  LYS B  77      96.461  41.812 -18.842  1.00 20.00   6
ATOM     46  CE  LYS B  77      97.501  42.008 -17.745  1.00 20.00   6
ATOM     47  NZ  LYS B  77      98.771  42.582 -18.255  1.00 20.00   7
ATOM     48  C   LYS B  77      93.311  44.111 -22.012  1.00 20.00   6
ATOM     49  O   LYS B  77      92.218  44.585 -21.704  1.00 20.00   8
ATOM     50  N   ARG B  78      93.514  43.418 -23.129  1.00 20.00   7
ATOM     51  CA  ARG B  78      92.442  43.158 -24.086  1.00 20.00   6
ATOM     52  CB  ARG B  78      92.465  44.224 -25.193  1.00 20.00   6
ATOM     53  CG  ARG B  78      93.787  44.344 -25.925  1.00 20.00   6
ATOM     54  CD  ARG B  78      93.833  45.612 -26.771  1.00 20.00   6
ATOM     55  NE  ARG B  78      95.052  45.702 -27.575  1.00 20.00   7
ATOM     56  CZ  ARG B  78      96.287  45.751 -27.078  1.00 20.00   6
ATOM     57  NH1 ARG B  78      96.486  45.721 -25.764  1.00 20.00   7
ATOM     58  NH2 ARG B  78      97.330  45.828 -27.897  1.00 20.00   7
ATOM     59  C   ARG B  78      92.570  41.754 -24.678  1.00 20.00   6
ATOM     60  O   ARG B  78      93.625  41.126 -24.581  1.00 20.00   8
ATOM     61  N   PRO B  79      91.494  41.240 -25.303  1.00 20.00   7
ATOM     62  CD  PRO B  79      90.195  41.894 -25.543  1.00 20.00   6
ATOM     63  CA  PRO B  79      91.519  39.899 -25.896  1.00 20.00   6
ATOM     64  CB  PRO B  79      90.214  39.848 -26.691  1.00 20.00   6
ATOM     65  CG  PRO B  79      89.304  40.725 -25.889  1.00 20.00   6
ATOM     66  C   PRO B  79      92.737  39.614 -26.778  1.00 20.00   6
ATOM     67  O   PRO B  79      93.311  38.523 -26.717  1.00 20.00   8
ATOM     68  N   GLU B  80      93.124  40.597 -27.589  1.00 20.00   7
ATOM     69  CA  GLU B  80      94.254  40.441 -28.503  1.00 20.00   6
ATOM     70  CB  GLU B  80      94.358  41.644 -29.446  1.00 20.00   6
ATOM     71  CG  GLU B  80      94.881  42.912 -28.800  1.00 20.00   6
ATOM     72  CD  GLU B  80      95.009  44.057 -29.788  1.00 20.00   6
ATOM     73  OE1 GLU B  80      93.968  44.513 -30.308  1.00 20.00   8
ATOM     74  OE2 GLU B  80      96.150  44.498 -30.047  1.00 20.00   8
ATOM     75  C   GLU B  80      95.591  40.235 -27.787  1.00 20.00   6
ATOM     76  O   GLU B  80      96.558  39.795 -28.405  1.00 20.00   8
ATOM     77  N   ASP B  81      95.656  40.559 -26.497  1.00 20.00   7
ATOM     78  CA  ASP B  81      96.902  40.380 -25.749  1.00 20.00   6
ATOM     79  CB  ASP B  81      96.888  41.192 -24.446  1.00 20.00   6
ATOM     80  CG  ASP B  81      96.774  42.688 -24.682  1.00 20.00   6
ATOM     81  OD1 ASP B  81      97.436  43.193 -25.606  1.00 20.00   8
ATOM     82  OD2 ASP B  81      96.033  43.362 -23.933  1.00 20.00   8
ATOM     83  C   ASP B  81      97.111  38.914 -25.393  1.00 20.00   6
ATOM     84  O   ASP B  81      98.172  38.535 -24.890  1.00 20.00   8
ATOM     85  N   PHE B  82      96.103  38.093 -25.679  1.00 20.00   7
ATOM     86  CA  PHE B  82      96.140  36.677 -25.340  1.00 20.00   6
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ATOM     87  CB  PHE B  82      95.056  36.369 -24.302  1.00 20.00  6
ATOM     88  CG  PHE B  82      95.157  37.187 -23.050  1.00 20.00  6
ATOM     89  CD1 PHE B  82      95.880  36.724 -21.959  1.00 20.00  6
ATOM     90  CD2 PHE B  82      94.525  38.423 -22.961  1.00 20.00  6
ATOM     91  CE1 PHE B  82      95.976  37.479 -20.793  1.00 20.00  6
ATOM     92  CE2 PHE B  82      94.615  39.188 -21.800  1.00 20.00  6
ATOM     93  CZ  PHE B  82      95.343  38.712 -20.713  1.00 20.00  6
ATOM     94  C   PHE B  82      95.929  35.719 -26.496  1.00 20.00  6
ATOM     95  O   PHE B  82      95.342  36.061 -27.524  1.00 20.00  8
ATOM     96  N   LYS B  83      96.406  34.500 -26.286  1.00 20.00  7
ATOM     97  CA  LYS B  83      96.242  33.411 -27.228  1.00 20.00  6
ATOM     98  CB  LYS B  83      97.594  32.777 -27.562  1.00 20.00  6
ATOM     99  CG  LYS B  83      97.503  31.531 -28.425  1.00 20.00  6
ATOM    100  CD  LYS B  83      98.888  31.074 -28.856  1.00 20.00  6
ATOM    101  CE  LYS B  83      98.826  29.808 -29.699  1.00 20.00  6
ATOM    102  NZ  LYS B  83      98.287  28.654 -28.918  1.00 20.00  7
ATOM    103  C   LYS B  83      95.387  32.446 -26.416  1.00 20.00  6
ATOM    104  O   LYS B  83      95.884  31.776 -25.510  1.00 20.00  8
ATOM    105  N   PHE B  84      94.094  32.393 -26.710  1.00 20.00  7
ATOM    106  CA  PHE B  84      93.217  31.511 -25.958  1.00 20.00  6
ATOM    107  CB  PHE B  84      91.758  31.928 -26.133  1.00 20.00  6
ATOM    108  CG  PHE B  84      91.426  33.228 -25.462  1.00 20.00  6
ATOM    109  CD1 PHE B  84      91.668  34.439 -26.099  1.00 20.00  6
ATOM    110  CD2 PHE B  84      90.907  33.243 -24.174  1.00 20.00  6
ATOM    111  CE1 PHE B  84      91.400  35.644 -25.464  1.00 20.00  6
ATOM    112  CE2 PHE B  84      90.636  34.447 -23.528  1.00 20.00  6
ATOM    113  CZ  PHE B  84      90.884  35.646 -24.176  1.00 20.00  6
ATOM    114  C   PHE B  84      93.402  30.054 -26.335  1.00 20.00  6
ATOM    115  O   PHE B  84      93.734  29.734 -27.476  1.00 20.00  8
ATOM    116  N   GLY B  85      93.196  29.178 -25.359  1.00 20.00  7
ATOM    117  CA  GLY B  85      93.349  27.758 -25.591  1.00 20.00  6
ATOM    118  C   GLY B  85      92.103  26.977 -25.221  1.00 20.00  6
ATOM    119  O   GLY B  85      90.982  27.393 -25.525  1.00 20.00  8
ATOM    120  N   LYS B  86      92.296  25.858 -24.534  1.00 20.00  7
ATOM    121  CA  LYS B  86      91.182  25.005 -24.153  1.00 20.00  6
ATOM    122  CB  LYS B  86      91.695  23.640 -23.687  1.00 20.00  6
ATOM    123  CG  LYS B  86      92.421  23.667 -22.356  1.00 20.00  6
ATOM    124  CD  LYS B  86      92.855  22.272 -21.941  1.00 20.00  6
ATOM    125  CE  LYS B  86      93.685  22.319 -20.668  1.00 20.00  6
ATOM    126  NZ  LYS B  86      94.209  20.975 -20.287  1.00 20.00  7
ATOM    127  C   LYS B  86      90.267  25.576 -23.077  1.00 20.00  6
ATOM    128  O   LYS B  86      90.668  26.410 -22.260  1.00 20.00  8
ATOM    129  N   ILE B  87      89.026  25.106 -23.102  1.00 20.00  7
ATOM    130  CA  ILE B  87      88.023  25.497 -22.131  1.00 20.00  6
ATOM    131  CB  ILE B  87      86.604  25.159 -22.647  1.00 20.00  6
ATOM    132  CG2 ILE B  87      85.582  25.261 -21.503  1.00 20.00  6
ATOM    133  CG1 ILE B  87      86.260  26.085 -23.820  1.00 20.00  6
ATOM    134  CD1 ILE B  87      84.912  25.819 -24.463  1.00 20.00  6
ATOM    135  C   ILE B  87      88.312  24.687 -20.872  1.00 20.00  6
ATOM    136  O   ILE B  87      88.396  23.461 -20.927  1.00 20.00  8
ATOM    137  N   LEU B  88      88.473  25.368 -19.742  1.00 20.00  7
ATOM    138  CA  LEU B  88      88.757  24.686 -18.486  1.00 20.00  6
ATOM    139  CB  LEU B  88      89.592  25.586 -17.575  1.00 20.00  6
ATOM    140  CG  LEU B  88      90.968  25.987 -18.112  1.00 20.00  6
ATOM    141  CD1 LEU B  88      91.611  27.006 -17.186  1.00 20.00  6
ATOM    142  CD2 LEU B  88      91.836  24.756 -18.234  1.00 20.00  6
ATOM    143  C   LEU B  88      87.471  24.298 -17.776  1.00 20.00  6
ATOM    144  O   LEU B  88      87.434  23.334 -17.014  1.00 20.00  8
ATOM    145  N   GLY B  89      86.410  25.051 -18.024  1.00 20.00  7
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ATOM    146  CA  GLY B  89      85.148  24.749 -17.382  1.00 20.00  6
ATOM    147  C   GLY B  89      84.038  25.599 -17.953  1.00 20.00  6
ATOM    148  O   GLY B  89      84.296  26.657 -18.541  1.00 20.00  8
ATOM    149  N   GLU B  90      82.807  25.133 -17.781  1.00 20.00  7
ATOM    150  CA  GLU B  90      81.629  25.832 -18.279  1.00 20.00  6
ATOM    151  CB  GLU B  90      81.041  25.070 -19.471  1.00 20.00  6
ATOM    152  CG  GLU B  90      81.929  25.084 -20.706  1.00 20.00  6
ATOM    153  CD  GLU B  90      81.434  24.157 -21.802  1.00 20.00  6
ATOM    154  OE1 GLU B  90      81.539  22.923 -21.639  1.00 20.00  8
ATOM    155  OE2 GLU B  90      80.935  24.662 -22.827  1.00 20.00  8
ATOM    156  C   GLU B  90      80.575  25.970 -17.188  1.00 20.00  6
ATOM    157  O   GLU B  90      80.208  24.994 -16.543  1.00 20.00  8
ATOM    158  N   GLY B  91      80.103  27.193 -16.979  1.00 20.00  7
ATOM    159  CA  GLY B  91      79.080  27.431 -15.979  1.00 20.00  6
ATOM    160  C   GLY B  91      77.835  27.949 -16.673  1.00 20.00  6
ATOM    161  O   GLY B  91      77.804  28.046 -17.903  1.00 20.00  8
ATOM    162  N   SER B  92      76.808  28.291 -15.904  1.00 20.00  7
ATOM    163  CA  SER B  92      75.582  28.794 -16.508  1.00 20.00  6
ATOM    164  CB  SER B  92      74.428  28.719 -15.505  1.00 20.00  6
ATOM    165  OG  SER B  92      74.786  29.335 -14.282  1.00 20.00  8
ATOM    166  C   SER B  92      75.726  30.219 -17.039  1.00 20.00  6
ATOM    167  O   SER B  92      75.078  30.585 -18.018  1.00 20.00  8
ATOM    168  N   PHE B  93      76.578  31.025 -16.411  1.00 20.00  7
ATOM    169  CA  PHE B  93      76.763  32.399 -16.870  1.00 20.00  6
ATOM    170  CB  PHE B  93      76.276  33.384 -15.807  1.00 20.00  6
ATOM    171  CG  PHE B  93      74.832  33.220 -15.469  1.00 20.00  6
ATOM    172  CD1 PHE B  93      74.435  32.323 -14.483  1.00 20.00  6
ATOM    173  CD2 PHE B  93      73.859  33.914 -16.183  1.00 20.00  6
ATOM    174  CE1 PHE B  93      73.086  32.117 -14.210  1.00 20.00  6
ATOM    175  CE2 PHE B  93      72.507  33.715 -15.919  1.00 20.00  6
ATOM    176  CZ  PHE B  93      72.120  32.812 -14.930  1.00 20.00  6
ATOM    177  C   PHE B  93      78.197  32.736 -17.240  1.00 20.00  6
ATOM    178  O   PHE B  93      78.543  33.908 -17.397  1.00 20.00  8
ATOM    179  N   SER B  94      79.030  31.713 -17.394  1.00 20.00  7
ATOM    180  CA  SER B  94      80.421  31.948 -17.735  1.00 20.00  6
ATOM    181  CB  SER B  94      81.174  32.443 -16.503  1.00 20.00  6
ATOM    182  OG  SER B  94      81.237  31.410 -15.535  1.00 20.00  8
ATOM    183  C   SER B  94      81.123  30.707 -18.253  1.00 20.00  6
ATOM    184  O   SER B  94      80.666  29.584 -18.048  1.00 20.00  8
ATOM    185  N   THR B  95      82.252  30.937 -18.913  1.00 20.00  7
ATOM    186  CA  THR B  95      83.088  29.879 -19.455  1.00 20.00  6
ATOM    187  CB  THR B  95      82.942  29.770 -20.985  1.00 20.00  6
ATOM    188  OG1 THR B  95      81.589  29.425 -21.309  1.00 20.00  8
ATOM    189  CG2 THR B  95      83.873  28.694 -21.536  1.00 20.00  6
ATOM    190  C   THR B  95      84.524  30.264 -19.118  1.00 20.00  6
ATOM    191  O   THR B  95      84.957  31.388 -19.399  1.00 20.00  8
ATOM    192  N   VAL B  96      85.257  29.348 -18.498  1.00 20.00  7
ATOM    193  CA  VAL B  96      86.642  29.628 -18.141  1.00 20.00  6
ATOM    194  CB  VAL B  96      86.991  29.050 -16.761  1.00 20.00  6
ATOM    195  CG1 VAL B  96      88.438  29.390 -16.407  1.00 20.00  6
ATOM    196  CG2 VAL B  96      86.041  29.627 -15.707  1.00 20.00  6
ATOM    197  C   VAL B  96      87.541  29.027 -19.210  1.00 20.00  6
ATOM    198  O   VAL B  96      87.432  27.845 -19.540  1.00 20.00  8
ATOM    199  N   VAL B  97      88.416  29.858 -19.763  1.00 20.00  7
ATOM    200  CA  VAL B  97      89.312  29.430 -20.824  1.00 20.00  6
ATOM    201  CB  VAL B  97      89.006  30.194 -22.130  1.00 20.00  6
ATOM    202  CG1 VAL B  97      89.828  29.624 -23.279  1.00 20.00  6
ATOM    203  CG2 VAL B  97      87.515  30.116 -22.444  1.00 20.00  6
ATOM    204  C   VAL B  97      90.771  29.664 -20.458  1.00 20.00  6
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ATOM    205  O   VAL B  97      91.122  30.698 -19.889  1.00 20.00   8
ATOM    206  N   LEU B  98      91.617  28.690 -20.770  1.00 20.00   7
ATOM    207  CA  LEU B  98      93.039  28.821 -20.499  1.00 20.00   6
ATOM    208  CB  LEU B  98      93.727  27.459 -20.618  1.00 20.00   6
ATOM    209  CG  LEU B  98      95.240  27.421 -20.383  1.00 20.00   6
ATOM    210  CD1 LEU B  98      95.565  28.019 -19.021  1.00 20.00   6
ATOM    211  CD2 LEU B  98      95.739  25.987 -20.463  1.00 20.00   6
ATOM    212  C   LEU B  98      93.580  29.785 -21.552  1.00 20.00   6
ATOM    213  O   LEU B  98      93.293  29.637 -22.738  1.00 20.00   8
ATOM    214  N   ALA B  99      94.343  30.783 -21.121  1.00 20.00   7
ATOM    215  CA  ALA B  99      94.897  31.767 -22.043  1.00 20.00   6
ATOM    216  CB  ALA B  99      94.087  33.055 -21.980  1.00 20.00   6
ATOM    217  C   ALA B  99      96.353  32.067 -21.723  1.00 20.00   6
ATOM    218  O   ALA B  99      96.748  32.110 -20.554  1.00 20.00   8
ATOM    219  N   ARG B 100      97.152  32.270 -22.763  1.00 20.00   7
ATOM    220  CA  ARG B 100      98.554  32.596 -22.568  1.00 20.00   6
ATOM    221  CB  ARG B 100      99.442  31.657 -23.393  1.00 20.00   6
ATOM    222  CG  ARG B 100     100.934  31.833 -23.131  1.00 20.00   6
ATOM    223  CD  ARG B 100     101.770  30.835 -23.923  1.00 20.00   6
ATOM    224  NE  ARG B 100     101.600  29.452 -23.469  1.00 20.00   7
ATOM    225  CZ  ARG B 100     102.059  28.970 -22.314  1.00 20.00   6
ATOM    226  NH1 ARG B 100     102.722  29.752 -21.473  1.00 20.00   7
ATOM    227  NH2 ARG B 100     101.864  27.694 -22.003  1.00 20.00   7
ATOM    228  C   ARG B 100      98.756  34.045 -23.004  1.00 20.00   6
ATOM    229  O   ARG B 100      98.454  34.408 -24.146  1.00 20.00   8
ATOM    230  N   GLU B 101      99.228  34.883 -22.087  1.00 20.00   7
ATOM    231  CA  GLU B 101      99.470  36.286 -22.408  1.00 20.00   6
ATOM    232  CB  GLU B 101      99.709  37.091 -21.123  1.00 20.00   6
ATOM    233  CG  GLU B 101      99.986  38.571 -21.363  1.00 20.00   6
ATOM    234  CD  GLU B 101     100.164  39.347 -20.075  1.00 20.00   6
ATOM    235  OE1 GLU B 101     100.717  38.780 -19.114  1.00 20.00   8
ATOM    236  OE2 GLU B 101      99.765  40.531 -20.025  1.00 20.00   8
ATOM    237  C   GLU B 101     100.703  36.338 -23.317  1.00 20.00   6
ATOM    238  O   GLU B 101     101.773  35.865 -22.944  1.00 20.00   8
ATOM    239  N   LEU B 102     100.546  36.909 -24.507  1.00 20.00   7
ATOM    240  CA  LEU B 102     101.632  36.982 -25.482  1.00 20.00   6
ATOM    241  CB  LEU B 102     101.145  37.683 -26.753  1.00 20.00   6
ATOM    242  CG  LEU B 102     100.013  36.985 -27.517  1.00 20.00   6
ATOM    243  CD1 LEU B 102      99.500  37.897 -28.623  1.00 20.00   6
ATOM    244  CD2 LEU B 102     100.517  35.670 -28.089  1.00 20.00   6
ATOM    245  C   LEU B 102     102.906  37.663 -25.000  1.00 20.00   6
ATOM    246  O   LEU B 102     104.000  37.137 -25.180  1.00 20.00   8
ATOM    247  N   ALA B 103     102.760  38.828 -24.382  1.00 20.00   7
ATOM    248  CA  ALA B 103     103.909  39.587 -23.910  1.00 20.00   6
ATOM    249  CB  ALA B 103     103.464  41.002 -23.546  1.00 20.00   6
ATOM    250  C   ALA B 103     104.697  38.983 -22.747  1.00 20.00   6
ATOM    251  O   ALA B 103     105.832  39.389 -22.503  1.00 20.00   8
ATOM    252  N   THR B 104     104.122  38.007 -22.050  1.00 20.00   7
ATOM    253  CA  THR B 104     104.790  37.418 -20.893  1.00 20.00   6
ATOM    254  CB  THR B 104     104.059  37.799 -19.592  1.00 20.00   6
ATOM    255  OG1 THR B 104     102.712  37.303 -19.648  1.00 20.00   8
ATOM    256  CG2 THR B 104     104.033  39.313 -19.404  1.00 20.00   6
ATOM    257  C   THR B 104     104.880  35.902 -20.901  1.00 20.00   6
ATOM    258  O   THR B 104     105.677  35.323 -20.160  1.00 20.00   8
ATOM    259  N   SER B 105     104.042  35.274 -21.722  1.00 20.00   7
ATOM    260  CA  SER B 105     103.950  33.818 -21.842  1.00 20.00   6
ATOM    261  CB  SER B 105     105.344  33.213 -22.048  1.00 20.00   6
ATOM    262  OG  SER B 105     105.264  31.819 -22.287  1.00 20.00   8
ATOM    263  C   SER B 105     103.304  33.243 -20.576  1.00 20.00   6
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ATOM    264  O   SER B 105     103.286  32.029 -20.363  1.00 20.00   8
ATOM    265  N   ARG B 106     102.771  34.124 -19.736  1.00 20.00   7
ATOM    266  CA  ARG B 106     102.089  33.709 -18.509  1.00 20.00   6
ATOM    267  CB  ARG B 106     101.833  34.914 -17.598  1.00 20.00   6
ATOM    268  CG  ARG B 106     103.022  35.361 -16.781  1.00 20.00   6
ATOM    269  CD  ARG B 106     102.724  36.653 -16.045  1.00 20.00   6
ATOM    270  NE  ARG B 106     103.756  36.940 -15.051  1.00 20.00   7
ATOM    271  CZ  ARG B 106     103.964  38.132 -14.504  1.00 20.00   6
ATOM    272  NH1 ARG B 106     103.210  39.167 -14.858  1.00 20.00   7
ATOM    273  NH2 ARG B 106     104.918  38.279 -13.590  1.00 20.00   7
ATOM    274  C   ARG B 106     100.743  33.082 -18.856  1.00 20.00   6
ATOM    275  O   ARG B 106     100.069  33.534 -19.777  1.00 20.00   8
ATOM    276  N   GLU B 107     100.354  32.049 -18.115  1.00 20.00   7
ATOM    277  CA  GLU B 107      99.072  31.390 -18.336  1.00 20.00   6
ATOM    278  CB  GLU B 107      99.193  29.870 -18.212  1.00 20.00   6
ATOM    279  CG  GLU B 107     100.180  29.207 -19.144  1.00 20.00   6
ATOM    280  CD  GLU B 107     100.124  27.696 -19.023  1.00 20.00   6
ATOM    281  OE1 GLU B 107      99.373  27.068 -19.798  1.00 20.00   8
ATOM    282  OE2 GLU B 107     100.813  27.144 -18.138  1.00 20.00   8
ATOM    283  C   GLU B 107      98.070  31.848 -17.285  1.00 20.00   6
ATOM    284  O   GLU B 107      98.368  31.833 -16.095  1.00 20.00   8
ATOM    285  N   TYR B 108      96.885  32.243 -17.727  1.00 20.00   7
ATOM    286  CA  TYR B 108      95.829  32.667 -16.817  1.00 20.00   6
ATOM    287  CB  TYR B 108      95.525  34.156 -16.979  1.00 20.00   6
ATOM    288  CG  TYR B 108      96.603  35.089 -16.487  1.00 20.00   6
ATOM    289  CD1 TYR B 108      96.744  35.369 -15.129  1.00 20.00   6
ATOM    290  CE1 TYR B 108      97.727  36.260 -14.674  1.00 20.00   6
ATOM    291  CD2 TYR B 108      97.467  35.712 -17.386  1.00 20.00   6
ATOM    292  CE2 TYR B 108      98.442  36.597 -16.950  1.00 20.00   6
ATOM    293  CZ  TYR B 108      98.569  36.869 -15.599  1.00 20.00   6
ATOM    294  OH  TYR B 108      99.529  37.756 -15.187  1.00 20.00   8
ATOM    295  C   TYR B 108      94.566  31.899 -17.167  1.00 20.00   6
ATOM    296  O   TYR B 108      94.389  31.463 -18.306  1.00 20.00   8
ATOM    297  N   ALA B 109      93.697  31.723 -16.181  1.00 20.00   7
ATOM    298  CA  ALA B 109      92.421  31.073 -16.414  1.00 20.00   6
ATOM    299  CB  ALA B 109      92.024  30.225 -15.214  1.00 20.00   6
ATOM    300  C   ALA B 109      91.513  32.288 -16.542  1.00 20.00   6
ATOM    301  O   ALA B 109      91.278  33.003 -15.558  1.00 20.00   8
ATOM    302  N   ILE B 110      91.042  32.557 -17.756  1.00 20.00   7
ATOM    303  CA  ILE B 110      90.186  33.711 -17.968  1.00 20.00   6
ATOM    304  CB  ILE B 110      90.574  34.462 -19.271  1.00 20.00   6
ATOM    305  CG2 ILE B 110      89.628  35.630 -19.507  1.00 20.00   6
ATOM    306  CG1 ILE B 110      92.023  34.962 -19.159  1.00 20.00   6
ATOM    307  CD1 ILE B 110      92.487  35.847 -20.312  1.00 20.00   6
ATOM    308  C   ILE B 110      88.715  33.318 -18.004  1.00 20.00   6
ATOM    309  O   ILE B 110      88.285  32.527 -18.851  1.00 20.00   8
ATOM    310  N   LYS B 111      87.956  33.852 -17.052  1.00 20.00   7
ATOM    311  CA  LYS B 111      86.527  33.581 -16.975  1.00 20.00   6
ATOM    312  CB  LYS B 111      86.022  33.721 -15.531  1.00 20.00   6
ATOM    313  CG  LYS B 111      84.509  33.598 -15.411  1.00 20.00   6
ATOM    314  CD  LYS B 111      84.025  33.590 -13.965  1.00 20.00   6
ATOM    315  CE  LYS B 111      84.318  32.262 -13.277  1.00 20.00   6
ATOM    316  NZ  LYS B 111      83.784  32.217 -11.875  1.00 20.00   7
ATOM    317  C   LYS B 111      85.844  34.601 -17.869  1.00 20.00   6
ATOM    318  O   LYS B 111      86.017  35.807 -17.688  1.00 20.00   8
ATOM    319  N   ILE B 112      85.078  34.111 -18.838  1.00 20.00   7
ATOM    320  CA  ILE B 112      84.383  34.976 -19.782  1.00 20.00   6
ATOM    321  CB  ILE B 112      84.695  34.548 -21.233  1.00 20.00   6
ATOM    322  CG2 ILE B 112      84.042  35.505 -22.216  1.00 20.00   6
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ATOM    323  CG1 ILE B 112      86.216  34.518 -21.440  1.00 20.00      6
ATOM    324  CD1 ILE B 112      86.657  33.949 -22.779  1.00 20.00      6
ATOM    325  C   ILE B 112      82.878  34.916 -19.538  1.00 20.00      6
ATOM    326  O   ILE B 112      82.288  33.839 -19.510  1.00 20.00      8
ATOM    327  N   LEU B 113      82.269  36.083 -19.347  1.00 20.00      7
ATOM    328  CA  LEU B 113      80.835  36.172 -19.089  1.00 20.00      6
ATOM    329  CB  LEU B 113      80.585  36.696 -17.669  1.00 20.00      6
ATOM    330  CG  LEU B 113      81.350  36.038 -16.521  1.00 20.00      6
ATOM    331  CD1 LEU B 113      82.743  36.638 -16.428  1.00 20.00      6
ATOM    332  CD2 LEU B 113      80.609  36.258 -15.215  1.00 20.00      6
ATOM    333  C   LEU B 113      80.172  37.110 -20.090  1.00 20.00      6
ATOM    334  O   LEU B 113      80.634  38.232 -20.299  1.00 20.00      8
ATOM    335  N   GLU B 114      79.088  36.653 -20.709  1.00 20.00      7
ATOM    336  CA  GLU B 114      78.377  37.472 -21.681  1.00 20.00      6
ATOM    337  CB  GLU B 114      77.514  36.586 -22.581  1.00 20.00      6
ATOM    338  CG  GLU B 114      76.670  37.366 -23.571  1.00 20.00      6
ATOM    339  CD  GLU B 114      75.749  36.473 -24.372  1.00 20.00      6
ATOM    340  OE1 GLU B 114      75.083  35.613 -23.760  1.00 20.00      8
ATOM    341  OE2 GLU B 114      75.684  36.638 -25.611  1.00 20.00      8
ATOM    342  C   GLU B 114      77.509  38.491 -20.942  1.00 20.00      6
ATOM    343  O   GLU B 114      76.673  38.122 -20.113  1.00 20.00      8
ATOM    344  N   LYS B 115      77.709  39.771 -21.235  1.00 20.00      7
ATOM    345  CA  LYS B 115      76.945  40.808 -20.553  1.00 20.00      6
ATOM    346  CB  LYS B 115      77.433  42.202 -20.978  1.00 20.00      6
ATOM    347  CG  LYS B 115      78.653  42.675 -20.183  1.00 20.00      6
ATOM    348  CD  LYS B 115      79.174  44.045 -20.618  1.00 20.00      6
ATOM    349  CE  LYS B 115      79.832  43.994 -21.992  1.00 20.00      6
ATOM    350  NZ  LYS B 115      80.536  45.273 -22.323  1.00 20.00      7
ATOM    351  C   LYS B 115      75.435  40.693 -20.743  1.00 20.00      6
ATOM    352  O   LYS B 115      74.676  40.787 -19.778  1.00 20.00      8
ATOM    353  N   ARG B 116      74.997  40.471 -21.977  1.00 20.00      7
ATOM    354  CA  ARG B 116      73.570  40.363 -22.255  1.00 20.00      6
ATOM    355  CB  ARG B 116      73.346  40.066 -23.743  1.00 20.00      6
ATOM    356  CG  ARG B 116      71.893  39.821 -24.142  1.00 20.00      6
ATOM    357  CD  ARG B 116      70.931  40.791 -23.465  1.00 20.00      6
ATOM    358  NE  ARG B 116      71.401  42.172 -23.493  1.00 20.00      7
ATOM    359  CZ  ARG B 116      70.780  43.177 -22.884  1.00 20.00      6
ATOM    360  NH1 ARG B 116      69.663  42.949 -22.207  1.00 20.00      7
ATOM    361  NH2 ARG B 116      71.278  44.405 -22.942  1.00 20.00      7
ATOM    362  C   ARG B 116      72.888  39.298 -21.394  1.00 20.00      6
ATOM    363  O   ARG B 116      71.862  39.567 -20.764  1.00 20.00      8
ATOM    364  N   HIS B 117      73.463  38.101 -21.347  1.00 20.00      7
ATOM    365  CA  HIS B 117      72.885  37.020 -20.556  1.00 20.00      6
ATOM    366  CB  HIS B 117      73.704  35.738 -20.723  1.00 20.00      6
ATOM    367  CG  HIS B 117      73.053  34.525 -20.133  1.00 20.00      6
ATOM    368  CD2 HIS B 117      71.762  34.274 -19.810  1.00 20.00      6
ATOM    369  ND1 HIS B 117      73.752  33.376 -19.836  1.00 20.00      7
ATOM    370  CE1 HIS B 117      72.921  32.467 -19.355  1.00 20.00      6
ATOM    371  NE2 HIS B 117      71.707  32.987 -19.330  1.00 20.00      7
ATOM    372  C   HIS B 117      72.816  37.386 -19.077  1.00 20.00      6
ATOM    373  O   HIS B 117      71.823  37.113 -18.409  1.00 20.00      8
ATOM    374  N   ILE B 118      73.882  37.992 -18.564  1.00 20.00      7
ATOM    375  CA  ILE B 118      73.927  38.391 -17.160  1.00 20.00      6
ATOM    376  CB  ILE B 118      75.269  39.073 -16.827  1.00 20.00      6
ATOM    377  CG2 ILE B 118      75.180  39.787 -15.486  1.00 20.00      6
ATOM    378  CG1 ILE B 118      76.392  38.029 -16.834  1.00 20.00      6
ATOM    379  CD1 ILE B 118      77.784  38.625 -16.709  1.00 20.00      6
ATOM    380  C   ILE B 118      72.788  39.353 -16.833  1.00 20.00      6
ATOM    381  O   ILE B 118      72.101  39.196 -15.827  1.00 20.00      8
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ATOM    382  N   ILE B 119      72.596  40.349 -17.690  1.00 20.00  7
ATOM    383  CA  ILE B 119      71.538  41.333 -17.494  1.00 20.00  6
ATOM    384  CB  ILE B 119      71.646  42.473 -18.539  1.00 20.00  6
ATOM    385  CG2 ILE B 119      70.396  43.357 -18.492  1.00 20.00  6
ATOM    386  CG1 ILE B 119      72.919  43.292 -18.270  1.00 20.00  6
ATOM    387  CD1 ILE B 119      73.212  44.370 -19.314  1.00 20.00  6
ATOM    388  C   ILE B 119      70.154  40.687 -17.580  1.00 20.00  6
ATOM    389  O   ILE B 119      69.289  40.953 -16.747  1.00 20.00  8
ATOM    390  N   LYS B 120      69.950  39.832 -18.579  1.00 20.00  7
ATOM    391  CA  LYS B 120      68.659  39.169 -18.754  1.00 20.00  6
ATOM    392  CB  LYS B 120      68.697  38.200 -19.935  1.00 20.00  6
ATOM    393  CG  LYS B 120      68.942  38.841 -21.284  1.00 20.00  6
ATOM    394  CD  LYS B 120      68.926  37.782 -22.387  1.00 20.00  6
ATOM    395  CE  LYS B 120      69.934  36.665 -22.093  1.00 20.00  6
ATOM    396  NZ  LYS B 120      69.950  35.599 -23.127  1.00 20.00  7
ATOM    397  C   LYS B 120      68.229  38.398 -17.513  1.00 20.00  6
ATOM    398  O   LYS B 120      67.077  38.490 -17.092  1.00 20.00  8
ATOM    399  N   GLU B 121      69.154  37.639 -16.930  1.00 20.00  7
ATOM    400  CA  GLU B 121      68.851  36.839 -15.747  1.00 20.00  6
ATOM    401  CB  GLU B 121      69.678  35.549 -15.758  1.00 20.00  6
ATOM    402  CG  GLU B 121      69.485  34.674 -16.995  1.00 20.00  6
ATOM    403  CD  GLU B 121      68.029  34.326 -17.248  1.00 20.00  6
ATOM    404  OE1 GLU B 121      67.339  33.904 -16.295  1.00 20.00  8
ATOM    405  OE2 GLU B 121      67.574  34.470 -18.404  1.00 20.00  8
ATOM    406  C   GLU B 121      69.071  37.573 -14.424  1.00 20.00  6
ATOM    407  O   GLU B 121      69.117  36.946 -13.362  1.00 20.00  8
ATOM    408  N   ASN B 122      69.208  38.895 -14.485  1.00 20.00  7
ATOM    409  CA  ASN B 122      69.411  39.699 -13.281  1.00 20.00  6
ATOM    410  CB  ASN B 122      68.132  39.715 -12.439  1.00 20.00  6
ATOM    411  CG  ASN B 122      66.952  40.314 -13.177  1.00 20.00  6
ATOM    412  OD1 ASN B 122      66.428  39.725 -14.121  1.00 20.00  8
ATOM    413  ND2 ASN B 122      66.530  41.498 -12.748  1.00 20.00  7
ATOM    414  C   ASN B 122      70.563  39.180 -12.419  1.00 20.00  6
ATOM    415  O   ASN B 122      70.408  39.007 -11.212  1.00 20.00  8
ATOM    416  N   LYS B 123      71.716  38.942 -13.033  1.00 20.00  7
ATOM    417  CA  LYS B 123      72.870  38.434 -12.301  1.00 20.00  6
ATOM    418  CB  LYS B 123      73.500  37.266 -13.065  1.00 20.00  6
ATOM    419  CG  LYS B 123      72.568  36.086 -13.276  1.00 20.00  6
ATOM    420  CD  LYS B 123      72.065  35.539 -11.948  1.00 20.00  6
ATOM    421  CE  LYS B 123      71.032  34.445 -12.159  1.00 20.00  6
ATOM    422  NZ  LYS B 123      70.421  34.016 -10.871  1.00 20.00  7
ATOM    423  C   LYS B 123      73.931  39.498 -12.054  1.00 20.00  6
ATOM    424  O   LYS B 123      75.035  39.183 -11.611  1.00 20.00  8
ATOM    425  N   VAL B 124      73.607  40.753 -12.340  1.00 20.00  7
ATOM    426  CA  VAL B 124      74.575  41.822 -12.145  1.00 20.00  6
ATOM    427  CB  VAL B 124      73.997  43.201 -12.547  1.00 20.00  6
ATOM    428  CG1 VAL B 124      75.035  44.290 -12.302  1.00 20.00  6
ATOM    429  CG2 VAL B 124      73.608  43.186 -14.022  1.00 20.00  6
ATOM    430  C   VAL B 124      75.091  41.885 -10.712  1.00 20.00  6
ATOM    431  O   VAL B 124      76.278  42.115 -10.490  1.00 20.00  8
ATOM    432  N   PRO B 125      74.207  41.695  -9.716  1.00 20.00  7
ATOM    433  CD  PRO B 125      72.735  41.613  -9.757  1.00 20.00  6
ATOM    434  CA  PRO B 125      74.688  41.747  -8.331  1.00 20.00  6
ATOM    435  CB  PRO B 125      73.411  41.558  -7.512  1.00 20.00  6
ATOM    436  CG  PRO B 125      72.346  42.152  -8.396  1.00 20.00  6
ATOM    437  C   PRO B 125      75.715  40.643  -8.051  1.00 20.00  6
ATOM    438  O   PRO B 125      76.683  40.851  -7.325  1.00 20.00  8
ATOM    439  N   TYR B 126      75.493  39.475  -8.640  1.00 20.00  7
ATOM    440  CA  TYR B 126      76.380  38.334  -8.440  1.00 20.00  6
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ATOM    441  CB  TYR B 126      75.699  37.059  -8.942  1.00 20.00  6
ATOM    442  CG  TYR B 126      74.479  36.687  -8.127  1.00 20.00  6
ATOM    443  CD1 TYR B 126      74.611  36.068  -6.884  1.00 20.00  6
ATOM    444  CE1 TYR B 126      73.491  35.748  -6.112  1.00 20.00  6
ATOM    445  CD2 TYR B 126      73.193  36.981  -8.583  1.00 20.00  6
ATOM    446  CE2 TYR B 126      72.063  36.667  -7.817  1.00 20.00  6
ATOM    447  CZ  TYR B 126      72.223  36.052  -6.584  1.00 20.00  6
ATOM    448  OH  TYR B 126      71.118  35.743  -5.823  1.00 20.00  8
ATOM    449  C   TYR B 126      77.738  38.511  -9.113  1.00 20.00  6
ATOM    450  O   TYR B 126      78.777  38.273  -8.492  1.00 20.00  8
ATOM    451  N   VAL B 127      77.738  38.931 -10.374  1.00 20.00  7
ATOM    452  CA  VAL B 127      78.994  39.123 -11.085  1.00 20.00  6
ATOM    453  CB  VAL B 127      78.756  39.466 -12.567  1.00 20.00  6
ATOM    454  CG1 VAL B 127      80.096  39.637 -13.275  1.00 20.00  6
ATOM    455  CG2 VAL B 127      77.949  38.357 -13.234  1.00 20.00  6
ATOM    456  C   VAL B 127      79.798  40.242 -10.427  1.00 20.00  6
ATOM    457  O   VAL B 127      81.016  40.148 -10.292  1.00 20.00  8
ATOM    458  N   THR B 128      79.105  41.293 -10.006  1.00 20.00  7
ATOM    459  CA  THR B 128      79.746  42.424  -9.345  1.00 20.00  6
ATOM    460  CB  THR B 128      78.721  43.548  -9.070  1.00 20.00  6
ATOM    461  OG1 THR B 128      78.194  44.025 -10.316  1.00 20.00  8
ATOM    462  CG2 THR B 128      79.371  44.703  -8.330  1.00 20.00  6
ATOM    463  C   THR B 128      80.372  41.979  -8.019  1.00 20.00  6
ATOM    464  O   THR B 128      81.500  42.355  -7.696  1.00 20.00  8
ATOM    465  N   ARG B 129      79.637  41.172  -7.256  1.00 20.00  7
ATOM    466  CA  ARG B 129      80.126  40.678  -5.971  1.00 20.00  6
ATOM    467  CB  ARG B 129      79.035  39.888  -5.254  1.00 20.00  6
ATOM    468  CG  ARG B 129      79.428  39.438  -3.852  1.00 20.00  6
ATOM    469  CD  ARG B 129      78.351  38.554  -3.278  1.00 20.00  6
ATOM    470  NE  ARG B 129      77.048  39.209  -3.315  1.00 20.00  7
ATOM    471  CZ  ARG B 129      75.894  38.569  -3.484  1.00 20.00  6
ATOM    472  NH1 ARG B 129      75.878  37.250  -3.636  1.00 20.00  7
ATOM    473  NH2 ARG B 129      74.756  39.248  -3.501  1.00 20.00  7
ATOM    474  C   ARG B 129      81.354  39.788  -6.146  1.00 20.00  6
ATOM    475  O   ARG B 129      82.315  39.885  -5.379  1.00 20.00  8
ATOM    476  N   GLU B 130      81.316  38.917  -7.151  1.00 20.00  7
ATOM    477  CA  GLU B 130      82.439  38.029  -7.421  1.00 20.00  6
ATOM    478  CB  GLU B 130      82.191  37.211  -8.692  1.00 20.00  6
ATOM    479  CG  GLU B 130      83.408  36.427  -9.167  1.00 20.00  6
ATOM    480  CD  GLU B 130      83.060  35.338 -10.168  1.00 20.00  6
ATOM    481  OE1 GLU B 130      82.227  35.590 -11.061  1.00 20.00  8
ATOM    482  OE2 GLU B 130      83.626  34.231 -10.068  1.00 20.00  8
ATOM    483  C   GLU B 130      83.708  38.853  -7.580  1.00 20.00  6
ATOM    484  O   GLU B 130      84.723  38.575  -6.940  1.00 20.00  8
ATOM    485  N   ARG B 131      83.641  39.874  -8.428  1.00 20.00  7
ATOM    486  CA  ARG B 131      84.788  40.742  -8.673  1.00 20.00  6
ATOM    487  CB  ARG B 131      84.459  41.759  -9.777  1.00 20.00  6
ATOM    488  CG  ARG B 131      85.580  42.753 -10.035  1.00 20.00  6
ATOM    489  CD  ARG B 131      85.262  43.716 -11.167  1.00 20.00  6
ATOM    490  NE  ARG B 131      86.351  44.673 -11.355  1.00 20.00  7
ATOM    491  CZ  ARG B 131      86.416  45.561 -12.343  1.00 20.00  6
ATOM    492  NH1 ARG B 131      85.450  45.623 -13.250  1.00 20.00  7
ATOM    493  NH2 ARG B 131      87.450  46.388 -12.426  1.00 20.00  7
ATOM    494  C   ARG B 131      85.228  41.485  -7.409  1.00 20.00  6
ATOM    495  O   ARG B 131      86.413  41.500  -7.071  1.00 20.00  8
ATOM    496  N   ASP B 132      84.277  42.103  -6.715  1.00 20.00  7
ATOM    497  CA  ASP B 132      84.594  42.848  -5.505  1.00 20.00  6
ATOM    498  CB  ASP B 132      83.350  43.575  -4.987  1.00 20.00  6
ATOM    499  CG  ASP B 132      82.865  44.658  -5.943  1.00 20.00  6
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ATOM    500  OD1 ASP B 132      83.612  45.010  -6.886  1.00 20.00   8
ATOM    501  OD2 ASP B 132      81.739  45.167  -5.747  1.00 20.00   8
ATOM    502  C   ASP B 132      85.192  41.969  -4.401  1.00 20.00   6
ATOM    503  O   ASP B 132      86.191  42.337  -3.783  1.00 20.00   8
ATOM    504  N   VAL B 133      84.596  40.809  -4.150  1.00 20.00   7
ATOM    505  CA  VAL B 133      85.131  39.933  -3.116  1.00 20.00   6
ATOM    506  CB  VAL B 133      84.226  38.698  -2.885  1.00 20.00   6
ATOM    507  CG1 VAL B 133      84.920  37.713  -1.957  1.00 20.00   6
ATOM    508  CG2 VAL B 133      82.893  39.135  -2.271  1.00 20.00   6
ATOM    509  C   VAL B 133      86.540  39.470  -3.477  1.00 20.00   6
ATOM    510  O   VAL B 133      87.460  39.602  -2.675  1.00 20.00   8
ATOM    511  N   MET B 134      86.721  38.950  -4.688  1.00 20.00   7
ATOM    512  CA  MET B 134      88.040  38.474  -5.083  1.00 20.00   6
ATOM    513  CB  MET B 134      88.004  37.879  -6.492  1.00 20.00   6
ATOM    514  CG  MET B 134      87.183  36.603  -6.573  1.00 20.00   6
ATOM    515  SD  MET B 134      87.477  35.650  -8.077  1.00 20.00  16
ATOM    516  CE  MET B 134      88.730  34.515  -7.475  1.00 20.00   6
ATOM    517  C   MET B 134      89.115  39.552  -4.994  1.00 20.00   6
ATOM    518  O   MET B 134      90.253  39.264  -4.626  1.00 20.00   8
ATOM    519  N   SER B 135      88.758  40.790  -5.319  1.00 20.00   7
ATOM    520  CA  SER B 135      89.708  41.899  -5.260  1.00 20.00   6
ATOM    521  CB  SER B 135      89.084  43.175  -5.836  1.00 20.00   6
ATOM    522  OG  SER B 135      88.742  43.009  -7.202  1.00 20.00   8
ATOM    523  C   SER B 135      90.165  42.184  -3.830  1.00 20.00   6
ATOM    524  O   SER B 135      91.228  42.762  -3.614  1.00 20.00   8
ATOM    525  N   ARG B 136      89.354  41.782  -2.857  1.00 20.00   7
ATOM    526  CA  ARG B 136      89.672  42.013  -1.450  1.00 20.00   6
ATOM    527  CB  ARG B 136      88.384  42.156  -0.637  1.00 20.00   6
ATOM    528  CG  ARG B 136      87.509  43.336  -1.018  1.00 20.00   6
ATOM    529  CD  ARG B 136      86.215  43.306  -0.211  1.00 20.00   6
ATOM    530  NE  ARG B 136      86.491  43.117   1.209  1.00 20.00   7
ATOM    531  CZ  ARG B 136      85.565  42.888   2.132  1.00 20.00   6
ATOM    532  NH1 ARG B 136      84.285  42.821   1.786  1.00 20.00   7
ATOM    533  NH2 ARG B 136      85.920  42.715   3.401  1.00 20.00   7
ATOM    534  C   ARG B 136      90.506  40.891  -0.839  1.00 20.00   6
ATOM    535  O   ARG B 136      91.091  41.054   0.231  1.00 20.00   8
ATOM    536  N   LEU B 137      90.556  39.752  -1.515  1.00 20.00   7
ATOM    537  CA  LEU B 137      91.300  38.609  -1.005  1.00 20.00   6
ATOM    538  CB  LEU B 137      90.665  37.307  -1.504  1.00 20.00   6
ATOM    539  CG  LEU B 137      89.172  37.099  -1.213  1.00 20.00   6
ATOM    540  CD1 LEU B 137      88.748  35.728  -1.734  1.00 20.00   6
ATOM    541  CD2 LEU B 137      88.897  37.205   0.280  1.00 20.00   6
ATOM    542  C   LEU B 137      92.771  38.648  -1.402  1.00 20.00   6
ATOM    543  O   LEU B 137      93.103  38.871  -2.566  1.00 20.00   8
ATOM    544  N   ASP B 138      93.645  38.436  -0.424  1.00 20.00   7
ATOM    545  CA  ASP B 138      95.086  38.422  -0.656  1.00 20.00   6
ATOM    546  CB  ASP B 138      95.696  39.797  -0.352  1.00 20.00   6
ATOM    547  CG  ASP B 138      97.179  39.854  -0.674  1.00 20.00   6
ATOM    548  OD1 ASP B 138      97.601  39.173  -1.634  1.00 20.00   8
ATOM    549  OD2 ASP B 138      97.920  40.581   0.022  1.00 20.00   8
ATOM    550  C   ASP B 138      95.678  37.369   0.263  1.00 20.00   6
ATOM    551  O   ASP B 138      96.353  37.685   1.243  1.00 20.00   8
ATOM    552  N   HIS B 139      95.410  36.111  -0.065  1.00 20.00   7
ATOM    553  CA  HIS B 139      95.871  34.984   0.731  1.00 20.00   6
ATOM    554  CB  HIS B 139      94.769  34.610   1.737  1.00 20.00   6
ATOM    555  CG  HIS B 139      95.173  33.561   2.725  1.00 20.00   6
ATOM    556  CD2 HIS B 139      95.543  33.657   4.025  1.00 20.00   6
ATOM    557  ND1 HIS B 139      95.241  32.221   2.405  1.00 20.00   7
ATOM    558  CE1 HIS B 139      95.635  31.537   3.466  1.00 20.00   6
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ATOM    559  NE2 HIS B 139      95.825  32.385   4.461  1.00 20.00  7
ATOM    560  C   HIS B 139      96.176  33.828  -0.221  1.00 20.00  6
ATOM    561  O   HIS B 139      95.444  33.595  -1.182  1.00 20.00  8
ATOM    562  N   PRO B 140      97.257  33.080   0.038  1.00 20.00  7
ATOM    563  CD  PRO B 140      98.128  33.140   1.225  1.00 20.00  6
ATOM    564  CA  PRO B 140      97.635  31.959  -0.827  1.00 20.00  6
ATOM    565  CB  PRO B 140      98.913  31.433  -0.171  1.00 20.00  6
ATOM    566  CG  PRO B 140      98.687  31.730   1.277  1.00 20.00  6
ATOM    567  C   PRO B 140      96.614  30.846  -1.072  1.00 20.00  6
ATOM    568  O   PRO B 140      96.747  30.107  -2.044  1.00 20.00  8
ATOM    569  N   PHE B 141      95.607  30.712  -0.211  1.00 20.00  7
ATOM    570  CA  PHE B 141      94.620  29.649  -0.398  1.00 20.00  6
ATOM    571  CB  PHE B 141      94.206  29.056   0.961  1.00 20.00  6
ATOM    572  CG  PHE B 141      95.321  28.335   1.681  1.00 20.00  6
ATOM    573  CD1 PHE B 141      96.351  27.716   0.967  1.00 20.00  6
ATOM    574  CD2 PHE B 141      95.311  28.227   3.067  1.00 20.00  6
ATOM    575  CE1 PHE B 141      97.350  27.000   1.627  1.00 20.00  6
ATOM    576  CE2 PHE B 141      96.307  27.510   3.740  1.00 20.00  6
ATOM    577  CZ  PHE B 141      97.328  26.895   3.018  1.00 20.00  6
ATOM    578  C   PHE B 141      93.371  30.063  -1.181  1.00 20.00  6
ATOM    579  O   PHE B 141      92.335  29.398  -1.114  1.00 20.00  8
ATOM    580  N   PHE B 142      93.471  31.150  -1.934  1.00 20.00  7
ATOM    581  CA  PHE B 142      92.337  31.625  -2.721  1.00 20.00  6
ATOM    582  CB  PHE B 142      91.739  32.883  -2.082  1.00 20.00  6
ATOM    583  CG  PHE B 142      91.048  32.628  -0.772  1.00 20.00  6
ATOM    584  CD1 PHE B 142      89.715  32.227  -0.740  1.00 20.00  6
ATOM    585  CD2 PHE B 142      91.741  32.747   0.429  1.00 20.00  6
ATOM    586  CE1 PHE B 142      89.080  31.944   0.472  1.00 20.00  6
ATOM    587  CE2 PHE B 142      91.116  32.465   1.647  1.00 20.00  6
ATOM    588  CZ  PHE B 142      89.785  32.064   1.667  1.00 20.00  6
ATOM    589  C   PHE B 142      92.758  31.945  -4.146  1.00 20.00  6
ATOM    590  O   PHE B 142      93.865  32.429  -4.371  1.00 20.00  8
ATOM    591  N   VAL B 143      91.883  31.653  -5.106  1.00 20.00  7
ATOM    592  CA  VAL B 143      92.167  31.960  -6.504  1.00 20.00  6
ATOM    593  CB  VAL B 143      91.009  31.513  -7.435  1.00 20.00  6
ATOM    594  CG1 VAL B 143      91.116  32.209  -8.795  1.00 20.00  6
ATOM    595  CG2 VAL B 143      91.061  30.000  -7.623  1.00 20.00  6
ATOM    596  C   VAL B 143      92.301  33.469  -6.545  1.00 20.00  6
ATOM    597  O   VAL B 143      91.505  34.179  -5.932  1.00 20.00  8
ATOM    598  N   LYS B 144      93.312  33.957  -7.252  1.00 20.00  7
ATOM    599  CA  LYS B 144      93.547  35.392  -7.340  1.00 20.00  6
ATOM    600  CB  LYS B 144      95.051  35.689  -7.267  1.00 20.00  6
ATOM    601  CG  LYS B 144      95.382  37.182  -7.318  1.00 20.00  6
ATOM    602  CD  LYS B 144      96.881  37.441  -7.201  1.00 20.00  6
ATOM    603  CE  LYS B 144      97.191  38.936  -7.298  1.00 20.00  6
ATOM    604  NZ  LYS B 144      98.661  39.215  -7.246  1.00 20.00  7
ATOM    605  C   LYS B 144      92.989  36.003  -8.614  1.00 20.00  6
ATOM    606  O   LYS B 144      92.993  35.371  -9.675  1.00 20.00  8
ATOM    607  N   LEU B 145      92.495  37.230  -8.490  1.00 20.00  7
ATOM    608  CA  LEU B 145      91.968  37.975  -9.624  1.00 20.00  6
ATOM    609  CB  LEU B 145      90.678  38.703  -9.234  1.00 20.00  6
ATOM    610  CG  LEU B 145      89.938  39.486 -10.326  1.00 20.00  6
ATOM    611  CD1 LEU B 145      88.611  39.992  -9.782  1.00 20.00  6
ATOM    612  CD2 LEU B 145      90.791  40.652 -10.806  1.00 20.00  6
ATOM    613  C   LEU B 145      93.059  38.984  -9.968  1.00 20.00  6
ATOM    614  O   LEU B 145      93.291  39.940  -9.216  1.00 20.00  8
ATOM    615  N   TYR B 146      93.735  38.770 -11.093  1.00 20.00  7
ATOM    616  CA  TYR B 146      94.815  39.657 -11.517  1.00 20.00  6
ATOM    617  CB  TYR B 146      95.821  38.904 -12.389  1.00 20.00  6
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ATOM    618  CG  TYR B 146      96.624  37.858 -11.661  1.00 20.00  6
ATOM    619  CD1 TYR B 146      96.139  36.559 -11.498  1.00 20.00  6
ATOM    620  CE1 TYR B 146      96.894  35.589 -10.836  1.00 20.00  6
ATOM    621  CD2 TYR B 146      97.878  38.165 -11.140  1.00 20.00  6
ATOM    622  CE2 TYR B 146      98.639  37.208 -10.476  1.00 20.00  6
ATOM    623  CZ  TYR B 146      98.144  35.925 -10.331  1.00 20.00  6
ATOM    624  OH  TYR B 146      98.920  34.981  -9.706  1.00 20.00  8
ATOM    625  C   TYR B 146      94.357  40.884 -12.293  1.00 20.00  6
ATOM    626  O   TYR B 146      94.933  41.963 -12.160  1.00 20.00  8
ATOM    627  N   PHE B 147      93.326  40.722 -13.110  1.00 20.00  7
ATOM    628  CA  PHE B 147      92.855  41.832 -13.923  1.00 20.00  6
ATOM    629  CB  PHE B 147      93.823  42.044 -15.092  1.00 20.00  6
ATOM    630  CG  PHE B 147      94.027  40.809 -15.945  1.00 20.00  6
ATOM    631  CD1 PHE B 147      93.049  40.397 -16.850  1.00 20.00  6
ATOM    632  CD2 PHE B 147      95.188  40.047 -15.822  1.00 20.00  6
ATOM    633  CE1 PHE B 147      93.221  39.247 -17.617  1.00 20.00  6
ATOM    634  CE2 PHE B 147      95.372  38.893 -16.585  1.00 20.00  6
ATOM    635  CZ  PHE B 147      94.388  38.490 -17.485  1.00 20.00  6
ATOM    636  C   PHE B 147      91.473  41.566 -14.480  1.00 20.00  6
ATOM    637  O   PHE B 147      90.972  40.442 -14.423  1.00 20.00  8
ATOM    638  N   THR B 148      90.865  42.616 -15.021  1.00 20.00  7
ATOM    639  CA  THR B 148      89.560  42.509 -15.643  1.00 20.00  6
ATOM    640  CB  THR B 148      88.402  42.889 -14.678  1.00 20.00  6
ATOM    641  OG1 THR B 148      88.492  44.275 -14.338  1.00 20.00  8
ATOM    642  CG2 THR B 148      88.460  42.057 -13.403  1.00 20.00  6
ATOM    643  C   THR B 148      89.532  43.469 -16.821  1.00 20.00  6
ATOM    644  O   THR B 148      90.281  44.448 -16.866  1.00 20.00  8
ATOM    645  N   PHE B 149      88.685  43.161 -17.791  1.00 20.00  7
ATOM    646  CA  PHE B 149      88.508  44.011 -18.948  1.00 20.00  6
ATOM    647  CB  PHE B 149      89.750  44.013 -19.864  1.00 20.00  6
ATOM    648  CG  PHE B 149      90.133  42.664 -20.419  1.00 20.00  6
ATOM    649  CD1 PHE B 149      89.552  42.182 -21.587  1.00 20.00  6
ATOM    650  CD2 PHE B 149      91.122  41.903 -19.802  1.00 20.00  6
ATOM    651  CE1 PHE B 149      89.953  40.965 -22.142  1.00 20.00  6
ATOM    652  CE2 PHE B 149      91.532  40.681 -20.345  1.00 20.00  6
ATOM    653  CZ  PHE B 149      90.948  40.213 -21.517  1.00 20.00  6
ATOM    654  C   PHE B 149      87.271  43.498 -19.649  1.00 20.00  6
ATOM    655  O   PHE B 149      86.714  42.474 -19.251  1.00 20.00  8
ATOM    656  N   GLN B 150      86.812  44.221 -20.657  1.00 20.00  7
ATOM    657  CA  GLN B 150      85.619  43.807 -21.372  1.00 20.00  6
ATOM    658  CB  GLN B 150      84.358  44.260 -20.614  1.00 20.00  6
ATOM    659  CG  GLN B 150      84.302  45.761 -20.289  1.00 20.00  6
ATOM    660  CD  GLN B 150      83.011  46.172 -19.567  1.00 20.00  6
ATOM    661  OE1 GLN B 150      81.970  46.385 -20.196  1.00 20.00  8
ATOM    662  NE2 GLN B 150      83.078  46.273 -18.240  1.00 20.00  7
ATOM    663  C   GLN B 150      85.598  44.400 -22.760  1.00 20.00  6
ATOM    664  O   GLN B 150      86.281  45.387 -23.033  1.00 20.00  8
ATOM    665  N   ASP B 151      84.846  43.766 -23.649  1.00 20.00  7
ATOM    666  CA  ASP B 151      84.683  44.296 -24.992  1.00 20.00  6
ATOM    667  CB  ASP B 151      85.160  43.312 -26.074  1.00 20.00  6
ATOM    668  CG  ASP B 151      84.558  41.934 -25.939  1.00 20.00  6
ATOM    669  OD1 ASP B 151      83.425  41.812 -25.436  1.00 20.00  8
ATOM    670  OD2 ASP B 151      85.227  40.963 -26.365  1.00 20.00  8
ATOM    671  C   ASP B 151      83.188  44.573 -25.095  1.00 20.00  6
ATOM    672  O   ASP B 151      82.501  44.610 -24.069  1.00 20.00  8
ATOM    673  N   ASP B 152      82.669  44.758 -26.301  1.00 20.00  7
ATOM    674  CA  ASP B 152      81.251  45.062 -26.437  1.00 20.00  6
ATOM    675  CB  ASP B 152      80.907  45.346 -27.901  1.00 20.00  6
ATOM    676  CG  ASP B 152      81.616  46.574 -28.432  1.00 20.00  6
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ATOM    677  OD1 ASP B 152      81.748  47.555 -27.666  1.00 20.00   8
ATOM    678  OD2 ASP B 152      82.030  46.563 -29.613  1.00 20.00   8
ATOM    679  C   ASP B 152      80.285  44.020 -25.888  1.00 20.00   6
ATOM    680  O   ASP B 152      79.229  44.367 -25.357  1.00 20.00   8
ATOM    681  N   GLU B 153      80.641  42.747 -25.982  1.00 20.00   7
ATOM    682  CA  GLU B 153      79.727  41.711 -25.521  1.00 20.00   6
ATOM    683  CB  GLU B 153      79.516  40.685 -26.641  1.00 20.00   6
ATOM    684  CG  GLU B 153      79.577  41.260 -28.058  1.00 20.00   6
ATOM    685  CD  GLU B 153      81.006  41.472 -28.550  1.00 20.00   6
ATOM    686  OE1 GLU B 153      81.765  40.480 -28.635  1.00 20.00   8
ATOM    687  OE2 GLU B 153      81.374  42.627 -28.854  1.00 20.00   8
ATOM    688  C   GLU B 153      80.102  40.960 -24.247  1.00 20.00   6
ATOM    689  O   GLU B 153      79.222  40.473 -23.535  1.00 20.00   8
ATOM    690  N   LYS B 154      81.393  40.869 -23.944  1.00 20.00   7
ATOM    691  CA  LYS B 154      81.818  40.091 -22.787  1.00 20.00   6
ATOM    692  CB  LYS B 154      82.549  38.830 -23.273  1.00 20.00   6
ATOM    693  CG  LYS B 154      81.785  37.978 -24.278  1.00 20.00   6
ATOM    694  CD  LYS B 154      82.727  37.028 -25.021  1.00 20.00   6
ATOM    695  CE  LYS B 154      81.968  36.086 -25.952  1.00 20.00   6
ATOM    696  NZ  LYS B 154      82.894  35.300 -26.826  1.00 20.00   7
ATOM    697  C   LYS B 154      82.709  40.767 -21.756  1.00 20.00   6
ATOM    698  O   LYS B 154      83.412  41.740 -22.048  1.00 20.00   8
ATOM    699  N   LEU B 155      82.677  40.202 -20.551  1.00 20.00   7
ATOM    700  CA  LEU B 155      83.501  40.638 -19.428  1.00 20.00   6
ATOM    701  CB  LEU B 155      82.700  40.651 -18.127  1.00 20.00   6
ATOM    702  CG  LEU B 155      81.451  41.521 -18.004  1.00 20.00   6
ATOM    703  CD1 LEU B 155      80.805  41.273 -16.645  1.00 20.00   6
ATOM    704  CD2 LEU B 155      81.831  42.983 -18.152  1.00 20.00   6
ATOM    705  C   LEU B 155      84.578  39.559 -19.302  1.00 20.00   6
ATOM    706  O   LEU B 155      84.288  38.379 -19.495  1.00 20.00   8
ATOM    707  N   TYR B 156      85.802  39.956 -18.966  1.00 20.00   7
ATOM    708  CA  TYR B 156      86.893  38.998 -18.809  1.00 20.00   6
ATOM    709  CB  TYR B 156      87.953  39.189 -19.904  1.00 20.00   6
ATOM    710  CG  TYR B 156      87.450  39.053 -21.324  1.00 20.00   6
ATOM    711  CD1 TYR B 156      86.688  40.061 -21.920  1.00 20.00   6
ATOM    712  CE1 TYR B 156      86.233  39.938 -23.235  1.00 20.00   6
ATOM    713  CD2 TYR B 156      87.741  37.917 -22.077  1.00 20.00   6
ATOM    714  CE2 TYR B 156      87.288  37.782 -23.387  1.00 20.00   6
ATOM    715  CZ  TYR B 156      86.538  38.794 -23.958  1.00 20.00   6
ATOM    716  OH  TYR B 156      86.087  38.656 -25.246  1.00 20.00   8
ATOM    717  C   TYR B 156      87.566  39.182 -17.447  1.00 20.00   6
ATOM    718  O   TYR B 156      87.977  40.291 -17.110  1.00 20.00   8
ATOM    719  N   PHE B 157      87.657  38.104 -16.667  1.00 20.00   7
ATOM    720  CA  PHE B 157      88.325  38.152 -15.367  1.00 20.00   6
ATOM    721  CB  PHE B 157      87.448  37.575 -14.246  1.00 20.00   6
ATOM    722  CG  PHE B 157      86.194  38.360 -13.968  1.00 20.00   6
ATOM    723  CD1 PHE B 157      85.986  39.614 -14.535  1.00 20.00   6
ATOM    724  CD2 PHE B 157      85.206  37.828 -13.143  1.00 20.00   6
ATOM    725  CE1 PHE B 157      84.808  40.324 -14.290  1.00 20.00   6
ATOM    726  CE2 PHE B 157      84.025  38.532 -12.893  1.00 20.00   6
ATOM    727  CZ  PHE B 157      83.829  39.782 -13.470  1.00 20.00   6
ATOM    728  C   PHE B 157      89.579  37.295 -15.471  1.00 20.00   6
ATOM    729  O   PHE B 157      89.492  36.105 -15.765  1.00 20.00   8
ATOM    730  N   GLY B 158      90.742  37.893 -15.231  1.00 20.00   7
ATOM    731  CA  GLY B 158      91.985  37.146 -15.303  1.00 20.00   6
ATOM    732  C   GLY B 158      92.254  36.512 -13.955  1.00 20.00   6
ATOM    733  O   GLY B 158      92.575  37.211 -12.996  1.00 20.00   8
ATOM    734  N   LEU B 159      92.137  35.191 -13.886  1.00 20.00   7
ATOM    735  CA  LEU B 159      92.330  34.466 -12.634  1.00 20.00   6
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ATOM    736  CB  LEU B 159      91.116  33.580 -12.358  1.00 20.00      6
ATOM    737  CG  LEU B 159      89.724  34.208 -12.490  1.00 20.00      6
ATOM    738  CD1 LEU B 159      88.670  33.111 -12.398  1.00 20.00      6
ATOM    739  CD2 LEU B 159      89.513  35.246 -11.404  1.00 20.00      6
ATOM    740  C   LEU B 159      93.562  33.582 -12.643  1.00 20.00      6
ATOM    741  O   LEU B 159      94.061  33.204 -13.698  1.00 20.00      8
ATOM    742  N   SER B 160      94.046  33.237 -11.457  1.00 20.00      7
ATOM    743  CA  SER B 160      95.192  32.356 -11.377  1.00 20.00      6
ATOM    744  CB  SER B 160      95.665  32.206  -9.926  1.00 20.00      6
ATOM    745  OG  SER B 160      94.591  31.973  -9.042  1.00 20.00      8
ATOM    746  C   SER B 160      94.754  31.012 -11.951  1.00 20.00      6
ATOM    747  O   SER B 160      93.598  30.605 -11.813  1.00 20.00      8
ATOM    748  N   TYR B 161      95.674  30.339 -12.625  1.00 20.00      7
ATOM    749  CA  TYR B 161      95.381  29.050 -13.231  1.00 20.00      6
ATOM    750  CB  TYR B 161      96.170  28.924 -14.543  1.00 20.00      6
ATOM    751  CG  TYR B 161      96.128  27.564 -15.209  1.00 20.00      6
ATOM    752  CD1 TYR B 161      94.968  26.787 -15.193  1.00 20.00      6
ATOM    753  CE1 TYR B 161      94.915  25.554 -15.846  1.00 20.00      6
ATOM    754  CD2 TYR B 161      97.240  27.073 -15.895  1.00 20.00      6
ATOM    755  CE2 TYR B 161      97.198  25.841 -16.553  1.00 20.00      6
ATOM    756  CZ  TYR B 161      96.033  25.088 -16.523  1.00 20.00      6
ATOM    757  OH  TYR B 161      95.983  23.877 -17.173  1.00 20.00      8
ATOM    758  C   TYR B 161      95.724  27.905 -12.277  1.00 20.00      6
ATOM    759  O   TYR B 161      96.897  27.598 -12.065  1.00 20.00      8
ATOM    760  N   ALA B 162      94.696  27.288 -11.697  1.00 20.00      7
ATOM    761  CA  ALA B 162      94.893  26.166 -10.776  1.00 20.00      6
ATOM    762  CB  ALA B 162      93.666  25.995  -9.873  1.00 20.00      6
ATOM    763  C   ALA B 162      95.100  24.924 -11.637  1.00 20.00      6
ATOM    764  O   ALA B 162      94.146  24.251 -12.015  1.00 20.00      8
ATOM    765  N   LYS B 163      96.361  24.626 -11.930  1.00 20.00      7
ATOM    766  CA  LYS B 163      96.722  23.506 -12.795  1.00 20.00      6
ATOM    767  CB  LYS B 163      98.247  23.416 -12.912  1.00 20.00      6
ATOM    768  CG  LYS B 163      98.904  24.711 -13.360  1.00 20.00      6
ATOM    769  CD  LYS B 163     100.405  24.539 -13.554  1.00 20.00      6
ATOM    770  CE  LYS B 163     101.102  25.885 -13.690  1.00 20.00      6
ATOM    771  NZ  LYS B 163     100.976  26.701 -12.445  1.00 20.00      7
ATOM    772  C   LYS B 163      96.170  22.123 -12.464  1.00 20.00      6
ATOM    773  O   LYS B 163      95.823  21.370 -13.369  1.00 20.00      8
ATOM    774  N   ASN B 164      96.076  21.775 -11.186  1.00 20.00      7
ATOM    775  CA  ASN B 164      95.594  20.449 -10.842  1.00 20.00      6
ATOM    776  CB  ASN B 164      96.339  19.944  -9.610  1.00 20.00      6
ATOM    777  CG  ASN B 164      97.766  19.529  -9.943  1.00 20.00      6
ATOM    778  OD1 ASN B 164      97.992  18.776 -10.892  1.00 20.00      8
ATOM    779  ND2 ASN B 164      98.730  20.014  -9.171  1.00 20.00      7
ATOM    780  C   ASN B 164      94.084  20.246 -10.706  1.00 20.00      6
ATOM    781  O   ASN B 164      93.630  19.183 -10.286  1.00 20.00      8
ATOM    782  N   GLY B 165      93.309  21.257 -11.080  1.00 20.00      7
ATOM    783  CA  GLY B 165      91.863  21.127 -11.039  1.00 20.00      6
ATOM    784  C   GLY B 165      91.159  21.088  -9.694  1.00 20.00      6
ATOM    785  O   GLY B 165      91.663  21.598  -8.698  1.00 20.00      8
ATOM    786  N   GLU B 166      89.986  20.461  -9.689  1.00 20.00      7
ATOM    787  CA  GLU B 166      89.126  20.344  -8.513  1.00 20.00      6
ATOM    788  CB  GLU B 166      87.683  20.079  -8.962  1.00 20.00      6
ATOM    789  CG  GLU B 166      86.992  21.255  -9.646  1.00 20.00      6
ATOM    790  CD  GLU B 166      85.709  20.837 -10.358  1.00 20.00      6
ATOM    791  OE1 GLU B 166      85.137  19.794  -9.986  1.00 20.00      8
ATOM    792  OE2 GLU B 166      85.263  21.556 -11.279  1.00 20.00      8
ATOM    793  C   GLU B 166      89.520  19.270  -7.506  1.00 20.00      6
ATOM    794  O   GLU B 166      89.952  18.184  -7.874  1.00 20.00      8
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ATOM    795  N   LEU B 167      89.344  19.579  -6.226  1.00 20.00   7
ATOM    796  CA  LEU B 167      89.651  18.626  -5.168  1.00 20.00   6
ATOM    797  CB  LEU B 167      89.395  19.269  -3.802  1.00 20.00   6
ATOM    798  CG  LEU B 167      89.408  18.363  -2.569  1.00 20.00   6
ATOM    799  CD1 LEU B 167      90.769  17.703  -2.412  1.00 20.00   6
ATOM    800  CD2 LEU B 167      89.065  19.193  -1.338  1.00 20.00   6
ATOM    801  C   LEU B 167      88.757  17.394  -5.346  1.00 20.00   6
ATOM    802  O   LEU B 167      89.124  16.283  -4.968  1.00 20.00   8
ATOM    803  N   LEU B 168      87.580  17.600  -5.927  1.00 20.00   7
ATOM    804  CA  LEU B 168      86.647  16.500  -6.153  1.00 20.00   6
ATOM    805  CB  LEU B 168      85.364  17.014  -6.809  1.00 20.00   6
ATOM    806  CG  LEU B 168      84.292  15.977  -7.168  1.00 20.00   6
ATOM    807  CD1 LEU B 168      83.883  15.186  -5.929  1.00 20.00   6
ATOM    808  CD2 LEU B 168      83.083  16.687  -7.756  1.00 20.00   6
ATOM    809  C   LEU B 168      87.290  15.440  -7.046  1.00 20.00   6
ATOM    810  O   LEU B 168      87.091  14.243  -6.845  1.00 20.00   8
ATOM    811  N   LYS B 169      88.068  15.888  -8.027  1.00 20.00   7
ATOM    812  CA  LYS B 169      88.727  14.967  -8.941  1.00 20.00   6
ATOM    813  CB  LYS B 169      89.610  15.729  -9.930  1.00 20.00   6
ATOM    814  CG  LYS B 169      90.379  14.818 -10.882  1.00 20.00   6
ATOM    815  CD  LYS B 169      91.226  15.603 -11.877  1.00 20.00   6
ATOM    816  CE  LYS B 169      92.373  16.328 -11.192  1.00 20.00   6
ATOM    817  NZ  LYS B 169      93.253  17.021 -12.173  1.00 20.00   7
ATOM    818  C   LYS B 169      89.574  13.949  -8.193  1.00 20.00   6
ATOM    819  O   LYS B 169      89.543  12.758  -8.504  1.00 20.00   8
ATOM    820  N   TYR B 170      90.334  14.417  -7.207  1.00 20.00   7
ATOM    821  CA  TYR B 170      91.197  13.527  -6.441  1.00 20.00   6
ATOM    822  CB  TYR B 170      92.243  14.346  -5.682  1.00 20.00   6
ATOM    823  CG  TYR B 170      93.217  15.010  -6.624  1.00 20.00   6
ATOM    824  CD1 TYR B 170      94.347  14.331  -7.085  1.00 20.00   6
ATOM    825  CE1 TYR B 170      95.195  14.900  -8.036  1.00 20.00   6
ATOM    826  CD2 TYR B 170      92.963  16.282  -7.133  1.00 20.00   6
ATOM    827  CE2 TYR B 170      93.801  16.861  -8.083  1.00 20.00   6
ATOM    828  CZ  TYR B 170      94.913  16.164  -8.532  1.00 20.00   6
ATOM    829  OH  TYR B 170      95.727  16.727  -9.493  1.00 20.00   8
ATOM    830  C   TYR B 170      90.419  12.622  -5.499  1.00 20.00   6
ATOM    831  O   TYR B 170      90.834  11.494  -5.233  1.00 20.00   8
ATOM    832  N   ILE B 171      89.287  13.098  -4.993  1.00 20.00   7
ATOM    833  CA  ILE B 171      88.488  12.262  -4.112  1.00 20.00   6
ATOM    834  CB  ILE B 171      87.278  13.028  -3.538  1.00 20.00   6
ATOM    835  CG2 ILE B 171      86.367  12.065  -2.791  1.00 20.00   6
ATOM    836  CG1 ILE B 171      87.764  14.141  -2.603  1.00 20.00   6
ATOM    837  CD1 ILE B 171      86.652  14.990  -2.019  1.00 20.00   6
ATOM    838  C   ILE B 171      87.994  11.066  -4.931  1.00 20.00   6
ATOM    839  O   ILE B 171      88.030   9.925  -4.468  1.00 20.00   8
ATOM    840  N   ARG B 172      87.550  11.331  -6.156  1.00 20.00   7
ATOM    841  CA  ARG B 172      87.061  10.273  -7.031  1.00 20.00   6
ATOM    842  CB  ARG B 172      86.359  10.861  -8.259  1.00 20.00   6
ATOM    843  CG  ARG B 172      85.094  11.658  -7.963  1.00 20.00   6
ATOM    844  CD  ARG B 172      84.352  11.981  -9.259  1.00 20.00   6
ATOM    845  NE  ARG B 172      83.187  12.843  -9.063  1.00 20.00   7
ATOM    846  CZ  ARG B 172      82.192  12.589  -8.217  1.00 20.00   6
ATOM    847  NH1 ARG B 172      82.209  11.491  -7.469  1.00 20.00   7
ATOM    848  NH2 ARG B 172      81.168  13.428  -8.127  1.00 20.00   7
ATOM    849  C   ARG B 172      88.202   9.378  -7.497  1.00 20.00   6
ATOM    850  O   ARG B 172      88.050   8.160  -7.587  1.00 20.00   8
ATOM    851  N   LYS B 173      89.348   9.985  -7.783  1.00 20.00   7
ATOM    852  CA  LYS B 173      90.509   9.244  -8.256  1.00 20.00   6
ATOM    853  CB  LYS B 173      91.647  10.206  -8.603  1.00 20.00   6
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ATOM    854  CG  LYS B 173      92.930   9.511  -9.045  1.00 20.00      6
ATOM    855  CD  LYS B 173      94.081  10.496  -9.222  1.00 20.00      6
ATOM    856  CE  LYS B 173      93.862  11.432 -10.406  1.00 20.00      6
ATOM    857  NZ  LYS B 173      93.858  10.711 -11.715  1.00 20.00      7
ATOM    858  C   LYS B 173      91.025   8.191  -7.280  1.00 20.00      6
ATOM    859  O   LYS B 173      91.274   7.055  -7.674  1.00 20.00      8
ATOM    860  N   ILE B 174      91.192   8.554  -6.012  1.00 20.00      7
ATOM    861  CA  ILE B 174      91.710   7.593  -5.042  1.00 20.00      6
ATOM    862  CB  ILE B 174      92.884   8.191  -4.223  1.00 20.00      6
ATOM    863  CG2 ILE B 174      93.970   8.701  -5.166  1.00 20.00      6
ATOM    864  CG1 ILE B 174      92.394   9.337  -3.343  1.00 20.00      6
ATOM    865  CD1 ILE B 174      93.480   9.916  -2.457  1.00 20.00      6
ATOM    866  C   ILE B 174      90.674   7.030  -4.074  1.00 20.00      6
ATOM    867  O   ILE B 174      91.025   6.296  -3.151  1.00 20.00      8
ATOM    868  N   GLY B 175      89.405   7.367  -4.283  1.00 20.00      7
ATOM    869  CA  GLY B 175      88.359   6.855  -3.413  1.00 20.00      6
ATOM    870  C   GLY B 175      88.160   7.650  -2.138  1.00 20.00      6
ATOM    871  O   GLY B 175      87.083   8.198  -1.905  1.00 20.00      8
ATOM    872  N   SER B 176      89.192   7.701  -1.304  1.00 20.00      7
ATOM    873  CA  SER B 176      89.140   8.447  -0.053  1.00 20.00      6
ATOM    874  CB  SER B 176      88.395   7.653   1.026  1.00 20.00      6
ATOM    875  OG  SER B 176      89.150   6.543   1.472  1.00 20.00      8
ATOM    876  C   SER B 176      90.565   8.742   0.401  1.00 20.00      6
ATOM    877  O   SER B 176      91.506   8.049   0.009  1.00 20.00      8
ATOM    878  N   PHE B 177      90.718   9.769   1.228  1.00 20.00      7
ATOM    879  CA  PHE B 177      92.029  10.184   1.722  1.00 20.00      6
ATOM    880  CB  PHE B 177      92.028  11.694   1.990  1.00 20.00      6
ATOM    881  CG  PHE B 177      92.002  12.546   0.747  1.00 20.00      6
ATOM    882  CD1 PHE B 177      91.484  12.060  -0.449  1.00 20.00      6
ATOM    883  CD2 PHE B 177      92.481  13.855   0.787  1.00 20.00      6
ATOM    884  CE1 PHE B 177      91.443  12.860  -1.585  1.00 20.00      6
ATOM    885  CE2 PHE B 177      92.444  14.665  -0.343  1.00 20.00      6
ATOM    886  CZ  PHE B 177      91.925  14.168  -1.532  1.00 20.00      6
ATOM    887  C   PHE B 177      92.427   9.475   3.009  1.00 20.00      6
ATOM    888  O   PHE B 177      91.582   9.223   3.872  1.00 20.00      8
ATOM    889  N   ASP B 178      93.711   9.152   3.147  1.00 20.00      7
ATOM    890  CA  ASP B 178      94.155   8.529   4.385  1.00 20.00      6
ATOM    891  CB  ASP B 178      95.581   7.972   4.267  1.00 20.00      6
ATOM    892  CG  ASP B 178      96.594   9.018   3.845  1.00 20.00      6
ATOM    893  OD1 ASP B 178      96.392  10.214   4.139  1.00 20.00      8
ATOM    894  OD2 ASP B 178      97.612   8.634   3.230  1.00 20.00      8
ATOM    895  C   ASP B 178      94.092   9.640   5.436  1.00 20.00      6
ATOM    896  O   ASP B 178      93.736  10.778   5.117  1.00 20.00      8
ATOM    897  N   GLU B 179      94.443   9.324   6.677  1.00 20.00      7
ATOM    898  CA  GLU B 179      94.380  10.311   7.744  1.00 20.00      6
ATOM    899  CB  GLU B 179      94.623   9.637   9.096  1.00 20.00      6
ATOM    900  CG  GLU B 179      94.747  10.611  10.255  1.00 20.00      6
ATOM    901  CD  GLU B 179      94.331   9.994  11.574  1.00 20.00      6
ATOM    902  OE1 GLU B 179      94.589   8.789  11.770  1.00 20.00      8
ATOM    903  OE2 GLU B 179      93.753  10.717  12.416  1.00 20.00      8
ATOM    904  C   GLU B 179      95.320  11.501   7.575  1.00 20.00      6
ATOM    905  O   GLU B 179      94.948  12.636   7.881  1.00 20.00      8
ATOM    906  N   THR B 180      96.528  11.246   7.086  1.00 20.00      7
ATOM    907  CA  THR B 180      97.509  12.308   6.886  1.00 20.00      6
ATOM    908  CB  THR B 180      98.866  11.720   6.445  1.00 20.00      6
ATOM    909  OG1 THR B 180      99.349  10.842   7.466  1.00 20.00      8
ATOM    910  CG2 THR B 180      99.888  12.825   6.213  1.00 20.00      6
ATOM    911  C   THR B 180      97.040  13.331   5.849  1.00 20.00      6
ATOM    912  O   THR B 180      97.136  14.542   6.069  1.00 20.00      8
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	ATOM	913	N	CYS	B	181	96.534	12.845	4.721	1.00	20.00	7
	ATOM	914	CA	CYS	B	181	96.057	13.733	3.666	1.00	20.00	6
	ATOM	915	CB	CYS	B	181	95.836	12.945	2.375	1.00	20.00	6
	ATOM	916	SG	CYS	B	181	97.372	12.255	1.685	1.00	20.00	16
5	ATOM	917	C	CYS	B	181	94.775	14.449	4.079	1.00	20.00	6
	ATOM	918	O	CYS	B	181	94.570	15.615	3.733	1.00	20.00	8
	ATOM	919	N	THR	B	182	93.914	13.755	4.820	1.00	20.00	7
	ATOM	920	CA	THR	B	182	92.669	14.356	5.286	1.00	20.00	6
	ATOM	921	CB	THR	B	182	91.812	13.354	6.103	1.00	20.00	6
10	ATOM	922	OG1	THR	B	182	91.372	12.283	5.259	1.00	20.00	8
	ATOM	923	CG2	THR	B	182	90.600	14.054	6.690	1.00	20.00	6
	ATOM	924	C	THR	B	182	93.014	15.535	6.196	1.00	20.00	6
	ATOM	925	O	THR	B	182	92.515	16.649	6.019	1.00	20.00	8
	ATOM	926	N	ARG	B	183	93.873	15.273	7.175	1.00	20.00	7
15	ATOM	927	CA	ARG	B	183	94.299	16.293	8.121	1.00	20.00	6
	ATOM	928	CB	ARG	B	183	95.311	15.707	9.109	1.00	20.00	6
	ATOM	929	CG	ARG	B	183	95.957	16.744	10.012	1.00	20.00	6
	ATOM	930	CD	ARG	B	183	96.886	16.116	11.050	1.00	20.00	6
	ATOM	931	NE	ARG	B	183	96.167	15.220	11.949	1.00	20.00	7
20	ATOM	932	CZ	ARG	B	183	96.098	13.900	11.804	1.00	20.00	6
	ATOM	933	NH1	ARG	B	183	96.717	13.306	10.791	1.00	20.00	7
	ATOM	934	NH2	ARG	B	183	95.389	13.176	12.664	1.00	20.00	7
	ATOM	935	C	ARG	B	183	94.923	17.505	7.427	1.00	20.00	6
	ATOM	936	O	ARG	B	183	94.545	18.646	7.698	1.00	20.00	8
25	ATOM	937	N	PHE	B	184	95.877	17.264	6.534	1.00	20.00	7
	ATOM	938	CA	PHE	B	184	96.539	18.367	5.847	1.00	20.00	6
	ATOM	939	CB	PHE	B	184	97.610	17.847	4.889	1.00	20.00	6
	ATOM	940	CG	PHE	B	184	98.387	18.943	4.223	1.00	20.00	6
	ATOM	941	CD1	PHE	B	184	99.451	19.555	4.879	1.00	20.00	6
30	ATOM	942	CD2	PHE	B	184	98.009	19.415	2.975	1.00	20.00	6
	ATOM	943	CE1	PHE	B	184	100.125	20.627	4.301	1.00	20.00	6
	ATOM	944	CE2	PHE	B	184	98.676	20.491	2.388	1.00	20.00	6
	ATOM	945	CZ	PHE	B	184	99.735	21.097	3.053	1.00	20.00	6
	ATOM	946	C	PHE	B	184	95.580	19.267	5.066	1.00	20.00	6
35	ATOM	947	O	PHE	B	184	95.567	20.481	5.255	1.00	20.00	8
	ATOM	948	N	TYR	B	185	94.784	18.679	4.181	1.00	20.00	7
	ATOM	949	CA	TYR	B	185	93.854	19.471	3.390	1.00	20.00	6
	ATOM	950	CB	TYR	B	185	93.305	18.634	2.236	1.00	20.00	6
	ATOM	951	CG	TYR	B	185	94.337	18.504	1.140	1.00	20.00	6
40	ATOM	952	CD1	TYR	B	185	94.611	19.580	0.293	1.00	20.00	6
	ATOM	953	CE1	TYR	B	185	95.637	19.516	-0.643	1.00	20.00	6
	ATOM	954	CD2	TYR	B	185	95.118	17.352	1.017	1.00	20.00	6
	ATOM	955	CE2	TYR	B	185	96.152	17.282	0.081	1.00	20.00	6
	ATOM	956	CZ	TYR	B	185	96.405	18.367	-0.742	1.00	20.00	6
45	ATOM	957	OH	TYR	B	185	97.436	18.314	-1.657	1.00	20.00	8
	ATOM	958	C	TYR	B	185	92.738	20.098	4.208	1.00	20.00	6
	ATOM	959	O	TYR	B	185	92.286	21.195	3.891	1.00	20.00	8
	ATOM	960	N	THR	B	186	92.303	19.422	5.267	1.00	20.00	7
	ATOM	961	CA	THR	B	186	91.265	19.987	6.122	1.00	20.00	6
50	ATOM	962	CB	THR	B	186	90.799	18.996	7.219	1.00	20.00	6
	ATOM	963	OG1	THR	B	186	90.193	17.846	6.606	1.00	20.00	8
	ATOM	964	CG2	THR	B	186	89.774	19.671	8.144	1.00	20.00	6
	ATOM	965	C	THR	B	186	91.858	21.218	6.805	1.00	20.00	6
	ATOM	966	O	THR	B	186	91.188	22.242	6.948	1.00	20.00	8
55	ATOM	967	N	ALA	B	187	93.120	21.115	7.222	1.00	20.00	7
	ATOM	968	CA	ALA	B	187	93.787	22.234	7.882	1.00	20.00	6
	ATOM	969	CB	ALA	B	187	95.184	21.817	8.349	1.00	20.00	6
	ATOM	970	C	ALA	B	187	93.879	23.449	6.946	1.00	20.00	6
	ATOM	971	O	ALA	B	187	93.654	24.585	7.372	1.00	20.00	8

ATOM	972	N	GLU	B	188	94.205	23.222	5.674	1.00	20.00	7
ATOM	973	CA	GLU	B	188	94.292	24.343	4.740	1.00	20.00	6
ATOM	974	CB	GLU	B	188	94.843	23.898	3.376	1.00	20.00	6
ATOM	975	CG	GLU	B	188	96.285	23.391	3.407	1.00	20.00	6
ATOM	976	CD	GLU	B	188	97.030	23.639	2.104	1.00	20.00	6
ATOM	977	OE1	GLU	B	188	96.407	23.537	1.024	1.00	20.00	8
ATOM	978	OE2	GLU	B	188	98.247	23.932	2.156	1.00	20.00	8
ATOM	979	C	GLU	B	188	92.912	24.977	4.561	1.00	20.00	6
ATOM	980	O	GLU	B	188	92.782	26.196	4.533	1.00	20.00	8
ATOM	981	N	ILE	B	189	91.875	24.152	4.451	1.00	20.00	7
ATOM	982	CA	ILE	B	189	90.530	24.693	4.284	1.00	20.00	6
ATOM	983	CB	ILE	B	189	89.495	23.566	4.064	1.00	20.00	6
ATOM	984	CG2	ILE	B	189	88.094	24.157	3.947	1.00	20.00	6
ATOM	985	CG1	ILE	B	189	89.855	22.773	2.796	1.00	20.00	6
ATOM	986	CD1	ILE	B	189	89.058	21.488	2.616	1.00	20.00	6
ATOM	987	C	ILE	B	189	90.152	25.517	5.519	1.00	20.00	6
ATOM	988	O	ILE	B	189	89.634	26.630	5.396	1.00	20.00	8
ATOM	989	N	VAL	B	190	90.412	24.971	6.707	1.00	20.00	7
ATOM	990	CA	VAL	B	190	90.116	25.674	7.957	1.00	20.00	6
ATOM	991	CB	VAL	B	190	90.557	24.842	9.186	1.00	20.00	6
ATOM	992	CG1	VAL	B	190	90.540	25.717	10.451	1.00	20.00	6
ATOM	993	CG2	VAL	B	190	89.643	23.641	9.358	1.00	20.00	6
ATOM	994	C	VAL	B	190	90.865	27.012	7.984	1.00	20.00	6
ATOM	995	O	VAL	B	190	90.311	28.039	8.375	1.00	20.00	8
ATOM	996	N	SER	B	191	92.125	26.997	7.557	1.00	20.00	7
ATOM	997	CA	SER	B	191	92.934	28.218	7.546	1.00	20.00	6
ATOM	998	CB	SER	B	191	94.378	27.888	7.166	1.00	20.00	6
ATOM	999	OG	SER	B	191	95.220	29.007	7.363	1.00	20.00	8
ATOM	1000	C	SER	B	191	92.361	29.240	6.566	1.00	20.00	6
ATOM	1001	O	SER	B	191	92.351	30.444	6.838	1.00	20.00	8
ATOM	1002	N	ALA	B	192	91.882	28.754	5.425	1.00	20.00	7
ATOM	1003	CA	ALA	B	192	91.306	29.634	4.417	1.00	20.00	6
ATOM	1004	CB	ALA	B	192	91.006	28.850	3.141	1.00	20.00	6
ATOM	1005	C	ALA	B	192	90.029	30.256	4.970	1.00	20.00	6
ATOM	1006	O	ALA	B	192	89.799	31.458	4.822	1.00	20.00	8
ATOM	1007	N	LEU	B	193	89.203	29.439	5.621	1.00	20.00	7
ATOM	1008	CA	LEU	B	193	87.957	29.941	6.192	1.00	20.00	6
ATOM	1009	CB	LEU	B	193	87.101	28.783	6.725	1.00	20.00	6
ATOM	1010	CG	LEU	B	193	86.447	27.898	5.650	1.00	20.00	6
ATOM	1011	CD1	LEU	B	193	85.645	26.771	6.315	1.00	20.00	6
ATOM	1012	CD2	LEU	B	193	85.530	28.752	4.780	1.00	20.00	6
ATOM	1013	C	LEU	B	193	88.215	30.959	7.299	1.00	20.00	6
ATOM	1014	O	LEU	B	193	87.474	31.935	7.435	1.00	20.00	8
ATOM	1015	N	GLU	B	194	89.254	30.738	8.100	1.00	20.00	7
ATOM	1016	CA	GLU	B	194	89.562	31.699	9.157	1.00	20.00	6
ATOM	1017	CB	GLU	B	194	90.773	31.257	9.982	1.00	20.00	6
ATOM	1018	CG	GLU	B	194	91.288	32.353	10.914	1.00	20.00	6
ATOM	1019	CD	GLU	B	194	92.381	31.878	11.855	1.00	20.00	6
ATOM	1020	OE1	GLU	B	194	93.246	31.090	11.420	1.00	20.00	8
ATOM	1021	OE2	GLU	B	194	92.376	32.312	13.031	1.00	20.00	8
ATOM	1022	C	GLU	B	194	89.847	33.053	8.511	1.00	20.00	6
ATOM	1023	O	GLU	B	194	89.375	34.083	8.972	1.00	20.00	8
ATOM	1024	N	TYR	B	195	90.608	33.046	7.426	1.00	20.00	7
ATOM	1025	CA	TYR	B	195	90.928	34.294	6.743	1.00	20.00	6
ATOM	1026	CB	TYR	B	195	91.919	34.043	5.613	1.00	20.00	6
ATOM	1027	CG	TYR	B	195	92.193	35.271	4.774	1.00	20.00	6
ATOM	1028	CD1	TYR	B	195	93.098	36.244	5.202	1.00	20.00	6
ATOM	1029	CE1	TYR	B	195	93.356	37.382	4.429	1.00	20.00	6
ATOM	1030	CD2	TYR	B	195	91.545	35.461	3.553	1.00	20.00	6

ATOM	1031	CE2	TYR	B	195	91.794	36.591	2.775	1.00	20.00	6
ATOM	1032	CZ	TYR	B	195	92.701	37.545	3.219	1.00	20.00	6
ATOM	1033	OH	TYR	B	195	92.956	38.656	2.450	1.00	20.00	8
ATOM	1034	C	TYR	B	195	89.668	34.923	6.160	1.00	20.00	6
ATOM	1035	O	TYR	B	195	89.409	36.117	6.328	1.00	20.00	8
ATOM	1036	N	LEU	B	196	88.885	34.103	5.472	1.00	20.00	7
ATOM	1037	CA	LEU	B	196	87.664	34.576	4.845	1.00	20.00	6
ATOM	1038	CB	LEU	B	196	86.972	33.426	4.107	1.00	20.00	6
ATOM	1039	CG	LEU	B	196	85.933	33.824	3.060	1.00	20.00	6
ATOM	1040	CD1	LEU	B	196	86.602	34.659	1.966	1.00	20.00	6
ATOM	1041	CD2	LEU	B	196	85.305	32.568	2.463	1.00	20.00	6
ATOM	1042	C	LEU	B	196	86.731	35.161	5.888	1.00	20.00	6
ATOM	1043	O	LEU	B	196	86.299	36.308	5.774	1.00	20.00	8
ATOM	1044	N	HIS	B	197	86.431	34.378	6.917	1.00	20.00	7
ATOM	1045	CA	HIS	B	197	85.533	34.840	7.967	1.00	20.00	6
ATOM	1046	CB	HIS	B	197	85.241	33.697	8.942	1.00	20.00	6
ATOM	1047	CG	HIS	B	197	84.377	32.622	8.356	1.00	20.00	6
ATOM	1048	CD2	HIS	B	197	83.734	32.550	7.163	1.00	20.00	6
ATOM	1049	ND1	HIS	B	197	84.083	31.452	9.022	1.00	20.00	7
ATOM	1050	CE1	HIS	B	197	83.296	30.704	8.264	1.00	20.00	6
ATOM	1051	NE2	HIS	B	197	83.071	31.346	7.132	1.00	20.00	7
ATOM	1052	C	HIS	B	197	86.080	36.060	8.697	1.00	20.00	6
ATOM	1053	O	HIS	B	197	85.314	36.919	9.146	1.00	20.00	8
ATOM	1054	N	GLY	B	198	87.404	36.143	8.804	1.00	20.00	7
ATOM	1055	CA	GLY	B	198	88.009	37.285	9.464	1.00	20.00	6
ATOM	1056	C	GLY	B	198	87.687	38.580	8.737	1.00	20.00	6
ATOM	1057	O	GLY	B	198	87.784	39.661	9.311	1.00	20.00	8
ATOM	1058	N	LYS	B	199	87.308	38.475	7.466	1.00	20.00	7
ATOM	1059	CA	LYS	B	199	86.959	39.652	6.674	1.00	20.00	6
ATOM	1060	CB	LYS	B	199	87.577	39.573	5.279	1.00	20.00	6
ATOM	1061	CG	LYS	B	199	89.082	39.736	5.258	1.00	20.00	6
ATOM	1062	CD	LYS	B	199	89.574	39.919	3.833	1.00	20.00	6
ATOM	1063	CE	LYS	B	199	91.054	40.243	3.807	1.00	20.00	6
ATOM	1064	NZ	LYS	B	199	91.398	41.382	4.706	1.00	20.00	7
ATOM	1065	C	LYS	B	199	85.451	39.804	6.539	1.00	20.00	6
ATOM	1066	O	LYS	B	199	84.972	40.556	5.693	1.00	20.00	8
ATOM	1067	N	GLY	B	200	84.707	39.079	7.368	1.00	20.00	7
ATOM	1068	CA	GLY	B	200	83.258	39.158	7.328	1.00	20.00	6
ATOM	1069	C	GLY	B	200	82.646	38.660	6.032	1.00	20.00	6
ATOM	1070	O	GLY	B	200	81.644	39.198	5.564	1.00	20.00	8
ATOM	1071	N	ILE	B	201	83.243	37.630	5.445	1.00	20.00	7
ATOM	1072	CA	ILE	B	201	82.726	37.075	4.205	1.00	20.00	6
ATOM	1073	CB	ILE	B	201	83.775	37.140	3.080	1.00	20.00	6
ATOM	1074	CG2	ILE	B	201	83.257	36.413	1.841	1.00	20.00	6
ATOM	1075	CG1	ILE	B	201	84.109	38.599	2.761	1.00	20.00	6
ATOM	1076	CD1	ILE	B	201	85.330	38.758	1.870	1.00	20.00	6
ATOM	1077	C	ILE	B	201	82.329	35.623	4.395	1.00	20.00	6
ATOM	1078	O	ILE	B	201	83.094	34.826	4.942	1.00	20.00	8
ATOM	1079	N	ILE	B	202	81.125	35.291	3.940	1.00	20.00	7
ATOM	1080	CA	ILE	B	202	80.592	33.936	4.016	1.00	20.00	6
ATOM	1081	CB	ILE	B	202	79.119	33.953	4.481	1.00	20.00	6
ATOM	1082	CG2	ILE	B	202	78.583	32.522	4.595	1.00	20.00	6
ATOM	1083	CG1	ILE	B	202	79.008	34.675	5.825	1.00	20.00	6
ATOM	1084	CD1	ILE	B	202	77.576	34.865	6.294	1.00	20.00	6
ATOM	1085	C	ILE	B	202	80.644	33.393	2.589	1.00	20.00	6
ATOM	1086	O	ILE	B	202	80.182	34.056	1.663	1.00	20.00	8
ATOM	1087	N	HIS	B	203	81.204	32.204	2.395	1.00	20.00	7
ATOM	1088	CA	HIS	B	203	81.279	31.652	1.044	1.00	20.00	6
ATOM	1089	CB	HIS	B	203	82.258	30.480	0.999	1.00	20.00	6

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ATOM   1090  CG  HIS B 203      82.478  29.942  -0.380  1.00 20.00   6
ATOM   1091  CD2 HIS B 203      81.646  29.282  -1.220  1.00 20.00   6
ATOM   1092  ND1 HIS B 203      83.659  30.116  -1.069  1.00 20.00   7
ATOM   1093  CE1 HIS B 203      83.545  29.588  -2.275  1.00 20.00   6
ATOM   1094  NE2 HIS B 203      82.333  29.076  -2.392  1.00 20.00   7
ATOM   1095  C   HIS B 203      79.896  31.211   0.530  1.00 20.00   6
ATOM   1096  O   HIS B 203      79.508  31.546  -0.593  1.00 20.00   8
ATOM   1097  N   ARG B 204      79.168  30.458   1.357  1.00 20.00   7
ATOM   1098  CA  ARG B 204      77.819  29.969   1.039  1.00 20.00   6
ATOM   1099  CB  ARG B 204      76.916  31.117   0.583  1.00 20.00   6
ATOM   1100  CG  ARG B 204      76.601  32.120   1.675  1.00 20.00   6
ATOM   1101  CD  ARG B 204      75.316  32.878   1.377  1.00 20.00   6
ATOM   1102  NE  ARG B 204      75.376  33.616   0.119  1.00 20.00   7
ATOM   1103  CZ  ARG B 204      74.423  34.443  -0.303  1.00 20.00   6
ATOM   1104  NH1 ARG B 204      73.336  34.636   0.436  1.00 20.00   7
ATOM   1105  NH2 ARG B 204      74.555  35.084  -1.457  1.00 20.00   7
ATOM   1106  C   ARG B 204      77.700  28.829   0.030  1.00 20.00   6
ATOM   1107  O   ARG B 204      76.611  28.300  -0.177  1.00 20.00   8
ATOM   1108  N   ASP B 205      78.792  28.456  -0.620  1.00 20.00   7
ATOM   1109  CA  ASP B 205      78.718  27.342  -1.550  1.00 20.00   6
ATOM   1110  CB  ASP B 205      78.380  27.829  -2.961  1.00 20.00   6
ATOM   1111  CG  ASP B 205      77.941  26.694  -3.867  1.00 20.00   6
ATOM   1112  OD1 ASP B 205      77.544  25.638  -3.330  1.00 20.00   8
ATOM   1113  OD2 ASP B 205      77.982  26.853  -5.104  1.00 20.00   8
ATOM   1114  C   ASP B 205      80.019  26.560  -1.547  1.00 20.00   6
ATOM   1115  O   ASP B 205      80.508  26.122  -2.588  1.00 20.00   8
ATOM   1116  N   LEU B 206      80.573  26.375  -0.354  1.00 20.00   7
ATOM   1117  CA  LEU B 206      81.819  25.652  -0.208  1.00 20.00   6
ATOM   1118  CB  LEU B 206      82.361  25.826   1.212  1.00 20.00   6
ATOM   1119  CG  LEU B 206      83.764  25.271   1.471  1.00 20.00   6
ATOM   1120  CD1 LEU B 206      84.765  25.969   0.561  1.00 20.00   6
ATOM   1121  CD2 LEU B 206      84.135  25.477   2.933  1.00 20.00   6
ATOM   1122  C   LEU B 206      81.609  24.174  -0.514  1.00 20.00   6
ATOM   1123  O   LEU B 206      80.691  23.549   0.011  1.00 20.00   8
ATOM   1124  N   LYS B 207      82.461  23.628  -1.375  1.00 20.00   7
ATOM   1125  CA  LYS B 207      82.379  22.223  -1.765  1.00 20.00   6
ATOM   1126  CB  LYS B 207      81.160  22.000  -2.679  1.00 20.00   6
ATOM   1127  CG  LYS B 207      81.130  22.913  -3.893  1.00 20.00   6
ATOM   1128  CD  LYS B 207      79.876  22.720  -4.736  1.00 20.00   6
ATOM   1129  CE  LYS B 207      79.788  23.797  -5.813  1.00 20.00   6
ATOM   1130  NZ  LYS B 207      78.695  23.557  -6.791  1.00 20.00   7
ATOM   1131  C   LYS B 207      83.657  21.808  -2.487  1.00 20.00   6
ATOM   1132  O   LYS B 207      84.416  22.656  -2.960  1.00 20.00   8
ATOM   1133  N   PRO B 208      83.916  20.494  -2.582  1.00 20.00   7
ATOM   1134  CD  PRO B 208      83.153  19.378  -1.993  1.00 20.00   6
ATOM   1135  CA  PRO B 208      85.122  20.005  -3.259  1.00 20.00   6
ATOM   1136  CB  PRO B 208      84.922  18.494  -3.267  1.00 20.00   6
ATOM   1137  CG  PRO B 208      84.174  18.256  -1.984  1.00 20.00   6
ATOM   1138  C   PRO B 208      85.303  20.574  -4.666  1.00 20.00   6
ATOM   1139  O   PRO B 208      86.431  20.752  -5.124  1.00 20.00   8
ATOM   1140  N   GLU B 209      84.197  20.859  -5.347  1.00 20.00   7
ATOM   1141  CA  GLU B 209      84.243  21.410  -6.705  1.00 20.00   6
ATOM   1142  CB  GLU B 209      82.836  21.424  -7.317  1.00 20.00   6
ATOM   1143  CG  GLU B 209      82.755  22.081  -8.690  1.00 20.00   6
ATOM   1144  CD  GLU B 209      81.323  22.296  -9.159  1.00 20.00   6
ATOM   1145  OE1 GLU B 209      80.587  21.299  -9.322  1.00 20.00   8
ATOM   1146  OE2 GLU B 209      80.933  23.465  -9.364  1.00 20.00   8
ATOM   1147  C   GLU B 209      84.810  22.836  -6.716  1.00 20.00   6
ATOM   1148  O   GLU B 209      85.409  23.269  -7.705  1.00 20.00   8
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ATOM   1149  N   ASN B 210      84.604  23.549  -5.612  1.00 20.00  7
ATOM   1150  CA  ASN B 210      85.051  24.932  -5.439  1.00 20.00  6
ATOM   1151  CB  ASN B 210      84.033  25.695  -4.588  1.00 20.00  6
ATOM   1152  CG  ASN B 210      82.851  26.170  -5.396  1.00 20.00  6
ATOM   1153  OD1 ASN B 210      81.807  26.520  -4.846  1.00 20.00  8
ATOM   1154  ND2 ASN B 210      83.010  26.194  -6.717  1.00 20.00  7
ATOM   1155  C   ASN B 210      86.427  25.070  -4.797  1.00 20.00  6
ATOM   1156  O   ASN B 210      86.937  26.181  -4.641  1.00 20.00  8
ATOM   1157  N   ILE B 211      87.016  23.948  -4.406  1.00 20.00  7
ATOM   1158  CA  ILE B 211      88.331  23.958  -3.790  1.00 20.00  6
ATOM   1159  CB  ILE B 211      88.336  23.090  -2.521  1.00 20.00  6
ATOM   1160  CG2 ILE B 211      89.732  23.025  -1.925  1.00 20.00  6
ATOM   1161  CG1 ILE B 211      87.350  23.682  -1.510  1.00 20.00  6
ATOM   1162  CD1 ILE B 211      87.121  22.832  -0.285  1.00 20.00  6
ATOM   1163  C   ILE B 211      89.307  23.414  -4.816  1.00 20.00  6
ATOM   1164  O   ILE B 211      89.475  22.199  -4.949  1.00 20.00  8
ATOM   1165  N   LEU B 212      89.938  24.319  -5.558  1.00 20.00  7
ATOM   1166  CA  LEU B 212      90.875  23.918  -6.601  1.00 20.00  6
ATOM   1167  CB  LEU B 212      90.966  25.012  -7.673  1.00 20.00  6
ATOM   1168  CG  LEU B 212      89.630  25.510  -8.235  1.00 20.00  6
ATOM   1169  CD1 LEU B 212      89.896  26.462  -9.390  1.00 20.00  6
ATOM   1170  CD2 LEU B 212      88.781  24.331  -8.709  1.00 20.00  6
ATOM   1171  C   LEU B 212      92.254  23.628  -6.038  1.00 20.00  6
ATOM   1172  O   LEU B 212      92.537  23.923  -4.873  1.00 20.00  8
ATOM   1173  N   LEU B 213      93.114  23.053  -6.875  1.00 20.00  7
ATOM   1174  CA  LEU B 213      94.472  22.714  -6.472  1.00 20.00  6
ATOM   1175  CB  LEU B 213      94.609  21.192  -6.388  1.00 20.00  6
ATOM   1176  CG  LEU B 213      93.775  20.526  -5.292  1.00 20.00  6
ATOM   1177  CD1 LEU B 213      93.737  19.035  -5.508  1.00 20.00  6
ATOM   1178  CD2 LEU B 213      94.374  20.852  -3.935  1.00 20.00  6
ATOM   1179  C   LEU B 213      95.503  23.277  -7.449  1.00 20.00  6
ATOM   1180  O   LEU B 213      95.422  23.033  -8.657  1.00 20.00  8
ATOM   1181  N   ASN B 214      96.470  24.036  -6.940  1.00 20.00  7
ATOM   1182  CA  ASN B 214      97.488  24.585  -7.826  1.00 20.00  6
ATOM   1183  CB  ASN B 214      98.198  25.792  -7.201  1.00 20.00  6
ATOM   1184  CG  ASN B 214      98.938  25.448  -5.927  1.00 20.00  6
ATOM   1185  OD1 ASN B 214      99.267  24.288  -5.669  1.00 20.00  8
ATOM   1186  ND2 ASN B 214      99.224  26.469  -5.123  1.00 20.00  7
ATOM   1187  C   ASN B 214      98.508  23.515  -8.182  1.00 20.00  6
ATOM   1188  O   ASN B 214      98.420  22.372  -7.725  1.00 20.00  8
ATOM   1189  N   GLU B 215      99.482  23.894  -8.996  1.00 20.00  7
ATOM   1190  CA  GLU B 215     100.514  22.965  -9.430  1.00 20.00  6
ATOM   1191  CB  GLU B 215     101.491  23.687 -10.362  1.00 20.00  6
ATOM   1192  CG  GLU B 215     102.544  22.788 -10.979  1.00 20.00  6
ATOM   1193  CD  GLU B 215     103.323  23.482 -12.080  1.00 20.00  6
ATOM   1194  OE1 GLU B 215     103.909  24.554 -11.810  1.00 20.00  8
ATOM   1195  OE2 GLU B 215     103.344  22.957 -13.215  1.00 20.00  8
ATOM   1196  C   GLU B 215     101.275  22.307  -8.274  1.00 20.00  6
ATOM   1197  O   GLU B 215     101.801  21.205  -8.428  1.00 20.00  8
ATOM   1198  N   ASP B 216     101.335  22.976  -7.123  1.00 20.00  7
ATOM   1199  CA  ASP B 216     102.036  22.430  -5.958  1.00 20.00  6
ATOM   1200  CB  ASP B 216     102.727  23.549  -5.179  1.00 20.00  6
ATOM   1201  CG  ASP B 216     103.952  24.086  -5.896  1.00 20.00  6
ATOM   1202  OD1 ASP B 216     104.766  23.267  -6.376  1.00 20.00  8
ATOM   1203  OD2 ASP B 216     104.110  25.323  -5.973  1.00 20.00  8
ATOM   1204  C   ASP B 216     101.121  21.651  -5.013  1.00 20.00  6
ATOM   1205  O   ASP B 216     101.532  21.241  -3.925  1.00 20.00  8
ATOM   1206  N   MET B 217      99.877  21.463  -5.434  1.00 20.00  7
ATOM   1207  CA  MET B 217      98.890  20.730  -4.657  1.00 20.00  6
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ATOM   1208  CB  MET B 217      99.402  19.319  -4.358  1.00 20.00   6
ATOM   1209  CG  MET B 217      99.456  18.432  -5.601  1.00 20.00   6
ATOM   1210  SD  MET B 217      97.857  18.342  -6.445  1.00 20.00  16
ATOM   1211  CE  MET B 217      97.073  16.984  -5.543  1.00 20.00   6
ATOM   1212  C   MET B 217      98.397  21.403  -3.373  1.00 20.00   6
ATOM   1213  O   MET B 217      97.972  20.730  -2.435  1.00 20.00   8
ATOM   1214  N   HIS B 218      98.469  22.730  -3.331  1.00 20.00   7
ATOM   1215  CA  HIS B 218      97.949  23.487  -2.197  1.00 20.00   6
ATOM   1216  CB  HIS B 218      98.831  24.700  -1.898  1.00 20.00   6
ATOM   1217  CG  HIS B 218     100.100  24.357  -1.177  1.00 20.00   6
ATOM   1218  CD2 HIS B 218     101.390  24.362  -1.588  1.00 20.00   6
ATOM   1219  ND1 HIS B 218     100.117  23.935   0.136  1.00 20.00   7
ATOM   1220  CE1 HIS B 218     101.364  23.698   0.504  1.00 20.00   6
ATOM   1221  NE2 HIS B 218     102.156  23.947  -0.524  1.00 20.00   7
ATOM   1222  C   HIS B 218      96.583  23.939  -2.703  1.00 20.00   6
ATOM   1223  O   HIS B 218      96.400  24.090  -3.910  1.00 20.00   8
ATOM   1224  N   ILE B 219      95.628  24.160  -1.808  1.00 20.00   7
ATOM   1225  CA  ILE B 219      94.301  24.562  -2.257  1.00 20.00   6
ATOM   1226  CB  ILE B 219      93.232  24.359  -1.159  1.00 20.00   6
ATOM   1227  CG2 ILE B 219      93.266  22.918  -0.654  1.00 20.00   6
ATOM   1228  CG1 ILE B 219      93.460  25.353  -0.011  1.00 20.00   6
ATOM   1229  CD1 ILE B 219      92.351  25.342   1.036  1.00 20.00   6
ATOM   1230  C   ILE B 219      94.207  26.010  -2.714  1.00 20.00   6
ATOM   1231  O   ILE B 219      95.044  26.850  -2.375  1.00 20.00   8
ATOM   1232  N   GLN B 220      93.168  26.274  -3.497  1.00 20.00   7
ATOM   1233  CA  GLN B 220      92.859  27.600  -3.999  1.00 20.00   6
ATOM   1234  CB  GLN B 220      93.537  27.867  -5.350  1.00 20.00   6
ATOM   1235  CG  GLN B 220      95.011  28.246  -5.216  1.00 20.00   6
ATOM   1236  CD  GLN B 220      95.599  28.799  -6.503  1.00 20.00   6
ATOM   1237  OE1 GLN B 220      95.725  28.086  -7.502  1.00 20.00   8
ATOM   1238  NE2 GLN B 220      95.957  30.079  -6.486  1.00 20.00   7
ATOM   1239  C   GLN B 220      91.350  27.626  -4.140  1.00 20.00   6
ATOM   1240  O   GLN B 220      90.792  27.133  -5.124  1.00 20.00   8
ATOM   1241  N   ILE B 221      90.689  28.178  -3.129  1.00 20.00   7
ATOM   1242  CA  ILE B 221      89.240  28.260  -3.122  1.00 20.00   6
ATOM   1243  CB  ILE B 221      88.731  28.550  -1.700  1.00 20.00   6
ATOM   1244  CG2 ILE B 221      87.209  28.707  -1.708  1.00 20.00   6
ATOM   1245  CG1 ILE B 221      89.164  27.406  -0.773  1.00 20.00   6
ATOM   1246  CD1 ILE B 221      88.743  27.559   0.668  1.00 20.00   6
ATOM   1247  C   ILE B 221      88.760  29.339  -4.092  1.00 20.00   6
ATOM   1248  O   ILE B 221      89.411  30.374  -4.262  1.00 20.00   8
ATOM   1249  N   THR B 222      87.633  29.082  -4.748  1.00 20.00   7
ATOM   1250  CA  THR B 222      87.084  30.039  -5.701  1.00 20.00   6
ATOM   1251  CB  THR B 222      87.565  29.728  -7.125  1.00 20.00   6
ATOM   1252  OG1 THR B 222      87.179  30.795  -8.000  1.00 20.00   8
ATOM   1253  CG2 THR B 222      86.962  28.410  -7.618  1.00 20.00   6
ATOM   1254  C   THR B 222      85.554  30.028  -5.683  1.00 20.00   6
ATOM   1255  O   THR B 222      84.950  29.417  -4.791  1.00 20.00   8
ATOM   1256  N   ASP B 223      84.949  30.712  -6.659  1.00 20.00   7
ATOM   1257  CA  ASP B 223      83.492  30.806  -6.806  1.00 20.00   6
ATOM   1258  CB  ASP B 223      82.872  29.399  -6.767  1.00 20.00   6
ATOM   1259  CG  ASP B 223      81.414  29.384  -7.205  1.00 20.00   6
ATOM   1260  OD1 ASP B 223      80.990  30.335  -7.900  1.00 20.00   8
ATOM   1261  OD2 ASP B 223      80.701  28.414  -6.866  1.00 20.00   8
ATOM   1262  C   ASP B 223      82.878  31.694  -5.725  1.00 20.00   6
ATOM   1263  O   ASP B 223      82.191  31.208  -4.820  1.00 20.00   8
ATOM   1264  N   PHE B 224      83.105  33.001  -5.848  1.00 20.00   7
ATOM   1265  CA  PHE B 224      82.632  33.970  -4.866  1.00 20.00   6
ATOM   1266  CB  PHE B 224      83.800  34.869  -4.451  1.00 20.00   6
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ATOM	1267	CG	PHE	B	224	84.826	34.165	-3.612	1.00	20.00	6
ATOM	1268	CD1	PHE	B	224	84.590	33.931	-2.261	1.00	20.00	6
ATOM	1269	CD2	PHE	B	224	86.001	33.687	-4.182	1.00	20.00	6
ATOM	1270	CE1	PHE	B	224	85.509	33.227	-1.486	1.00	20.00	6
ATOM	1271	CE2	PHE	B	224	86.927	32.981	-3.418	1.00	20.00	6
ATOM	1272	CZ	PHE	B	224	86.679	32.750	-2.068	1.00	20.00	6
ATOM	1273	C	PHE	B	224	81.443	34.839	-5.256	1.00	20.00	6
ATOM	1274	O	PHE	B	224	81.001	35.678	-4.468	1.00	20.00	8
ATOM	1275	N	GLY	B	225	80.928	34.647	-6.463	1.00	20.00	7
ATOM	1276	CA	GLY	B	225	79.793	35.438	-6.894	1.00	20.00	6
ATOM	1277	C	GLY	B	225	78.612	35.265	-5.955	1.00	20.00	6
ATOM	1278	O	GLY	B	225	77.824	36.192	-5.753	1.00	20.00	8
ATOM	1279	N	THR	B	226	78.486	34.080	-5.367	1.00	20.00	7
ATOM	1280	CA	THR	B	226	77.379	33.819	-4.459	1.00	20.00	6
ATOM	1281	CB	THR	B	226	76.779	32.425	-4.715	1.00	20.00	6
ATOM	1282	OG1	THR	B	226	77.826	31.450	-4.762	1.00	20.00	8
ATOM	1283	CG2	THR	B	226	76.021	32.417	-6.041	1.00	20.00	6
ATOM	1284	C	THR	B	226	77.738	33.957	-2.981	1.00	20.00	6
ATOM	1285	O	THR	B	226	77.001	33.500	-2.107	1.00	20.00	8
ATOM	1286	N	ALA	B	227	78.867	34.598	-2.702	1.00	20.00	7
ATOM	1287	CA	ALA	B	227	79.282	34.800	-1.325	1.00	20.00	6
ATOM	1288	CB	ALA	B	227	80.738	35.242	-1.268	1.00	20.00	6
ATOM	1289	C	ALA	B	227	78.384	35.875	-0.726	1.00	20.00	6
ATOM	1290	O	ALA	B	227	77.623	36.529	-1.440	1.00	20.00	8
ATOM	1291	N	LYS	B	228	78.467	36.046	0.586	1.00	20.00	7
ATOM	1292	CA	LYS	B	228	77.670	37.051	1.274	1.00	20.00	6
ATOM	1293	CB	LYS	B	228	76.637	36.384	2.179	1.00	20.00	6
ATOM	1294	CG	LYS	B	228	75.705	37.357	2.890	1.00	20.00	6
ATOM	1295	CD	LYS	B	228	74.795	38.072	1.893	1.00	20.00	6
ATOM	1296	CE	LYS	B	228	73.849	39.049	2.587	1.00	20.00	6
ATOM	1297	NZ	LYS	B	228	73.000	39.781	1.605	1.00	20.00	7
ATOM	1298	C	LYS	B	228	78.616	37.896	2.110	1.00	20.00	6
ATOM	1299	O	LYS	B	228	79.355	37.366	2.940	1.00	20.00	8
ATOM	1300	N	VAL	B	229	78.603	39.206	1.881	1.00	20.00	7
ATOM	1301	CA	VAL	B	229	79.463	40.114	2.626	1.00	20.00	6
ATOM	1302	CB	VAL	B	229	79.976	41.256	1.734	1.00	20.00	6
ATOM	1303	CG1	VAL	B	229	80.853	42.191	2.540	1.00	20.00	6
ATOM	1304	CG2	VAL	B	229	80.746	40.686	0.561	1.00	20.00	6
ATOM	1305	C	VAL	B	229	78.687	40.710	3.793	1.00	20.00	6
ATOM	1306	O	VAL	B	229	77.798	41.537	3.599	1.00	20.00	8
ATOM	1307	N	LEU	B	230	79.034	40.284	5.003	1.00	20.00	7
ATOM	1308	CA	LEU	B	230	78.370	40.752	6.213	1.00	20.00	6
ATOM	1309	CB	LEU	B	230	78.740	39.856	7.395	1.00	20.00	6
ATOM	1310	CG	LEU	B	230	78.276	38.403	7.332	1.00	20.00	6
ATOM	1311	CD1	LEU	B	230	78.853	37.634	8.508	1.00	20.00	6
ATOM	1312	CD2	LEU	B	230	76.760	38.350	7.339	1.00	20.00	6
ATOM	1313	C	LEU	B	230	78.705	42.193	6.565	1.00	20.00	6
ATOM	1314	O	LEU	B	230	79.768	42.701	6.214	1.00	20.00	8
ATOM	1315	N	SER	B	231	77.781	42.839	7.270	1.00	20.00	7
ATOM	1316	CA	SER	B	231	77.957	44.219	7.708	1.00	20.00	6
ATOM	1317	CB	SER	B	231	77.082	45.161	6.875	1.00	20.00	6
ATOM	1318	OG	SER	B	231	75.714	44.795	6.948	1.00	20.00	8
ATOM	1319	C	SER	B	231	77.623	44.373	9.196	1.00	20.00	6
ATOM	1320	O	SER	B	231	78.322	45.086	9.919	1.00	20.00	8
ATOM	1321	N	PRO	B	232	76.553	43.705	9.674	1.00	20.00	7
ATOM	1322	CD	PRO	B	232	75.571	42.876	8.948	1.00	20.00	6
ATOM	1323	CA	PRO	B	232	76.182	43.811	11.091	1.00	20.00	6
ATOM	1324	CB	PRO	B	232	75.005	42.844	11.211	1.00	20.00	6
ATOM	1325	CG	PRO	B	232	74.367	42.933	9.862	1.00	20.00	6

ATOM	1326	C	PRO	B	232	77.332	43.438	12.024	1.00	20.00	6
ATOM	1327	O	PRO	B	232	78.199	42.640	11.666	1.00	20.00	8
ATOM	1328	N	ALA	B	237	74.215	38.132	11.762	1.00	20.00	7
ATOM	1329	CA	ALA	B	237	74.666	37.653	10.460	1.00	20.00	6
ATOM	1330	CB	ALA	B	237	75.541	36.417	10.637	1.00	20.00	6
ATOM	1331	C	ALA	B	237	73.479	37.324	9.558	1.00	20.00	6
ATOM	1332	O	ALA	B	237	73.143	36.158	9.374	1.00	20.00	8
ATOM	1333	N	ALA	B	238	72.841	38.347	8.996	1.00	20.00	7
ATOM	1334	CA	ALA	B	238	71.693	38.130	8.117	1.00	20.00	6
ATOM	1335	CB	ALA	B	238	70.973	39.450	7.853	1.00	20.00	6
ATOM	1336	C	ALA	B	238	72.123	37.497	6.798	1.00	20.00	6
ATOM	1337	O	ALA	B	238	73.315	37.404	6.500	1.00	20.00	8
ATOM	1338	N	ALA	B	239	71.146	37.057	6.012	1.00	20.00	7
ATOM	1339	CA	ALA	B	239	71.439	36.431	4.728	1.00	20.00	6
ATOM	1340	CB	ALA	B	239	72.152	35.123	4.952	1.00	20.00	6
ATOM	1341	C	ALA	B	239	70.173	36.194	3.918	1.00	20.00	6
ATOM	1342	O	ALA	B	239	69.329	37.079	3.825	1.00	20.00	8
ATOM	1343	N	ASN	B	240	70.068	34.996	3.339	1.00	20.00	7
ATOM	1344	CA	ASN	B	240	68.939	34.559	2.514	1.00	20.00	6
ATOM	1345	CB	ASN	B	240	67.614	35.160	2.999	1.00	20.00	6
ATOM	1346	CG	ASN	B	240	67.258	36.466	2.299	1.00	20.00	6
ATOM	1347	OD1	ASN	B	240	67.119	36.519	1.068	1.00	20.00	8
ATOM	1348	ND2	ASN	B	240	67.091	37.536	3.089	1.00	20.00	7
ATOM	1349	C	ASN	B	240	69.153	34.937	1.053	1.00	20.00	6
ATOM	1350	O	ASN	B	240	70.007	35.767	0.749	1.00	20.00	8
ATOM	1351	N	ALA	B	241	68.365	34.329	0.163	1.00	20.00	7
ATOM	1352	CA	ALA	B	241	68.401	34.570	-1.290	1.00	20.00	6
ATOM	1353	C	ALA	B	241	68.990	33.416	-2.103	1.00	20.00	6
ATOM	1354	O	ALA	B	241	68.353	32.919	-3.030	1.00	20.00	8
ATOM	1355	CB	ALA	B	241	69.168	35.859	-1.629	1.00	20.00	6
ATOM	1356	N	PHE	B	242	70.205	33.000	-1.762	1.00	20.00	7
ATOM	1357	CA	PHE	B	242	70.875	31.918	-2.481	1.00	20.00	6
ATOM	1358	CB	PHE	B	242	72.259	32.379	-2.952	1.00	20.00	6
ATOM	1359	CG	PHE	B	242	73.102	31.273	-3.521	1.00	20.00	6
ATOM	1360	CD1	PHE	B	242	72.843	30.767	-4.790	1.00	20.00	6
ATOM	1361	CD2	PHE	B	242	74.136	30.713	-2.773	1.00	20.00	6
ATOM	1362	CE1	PHE	B	242	73.599	29.718	-5.310	1.00	20.00	6
ATOM	1363	CE2	PHE	B	242	74.896	29.666	-3.281	1.00	20.00	6
ATOM	1364	CZ	PHE	B	242	74.627	29.166	-4.553	1.00	20.00	6
ATOM	1365	C	PHE	B	242	71.038	30.652	-1.646	1.00	20.00	6
ATOM	1366	O	PHE	B	242	71.213	30.716	-0.431	1.00	20.00	8
ATOM	1367	N	VAL	B	243	70.988	29.505	-2.318	1.00	20.00	7
ATOM	1368	CA	VAL	B	243	71.157	28.204	-1.675	1.00	20.00	6
ATOM	1369	CB	VAL	B	243	69.828	27.420	-1.617	1.00	20.00	6
ATOM	1370	CG1	VAL	B	243	70.066	26.023	-1.050	1.00	20.00	6
ATOM	1371	CG2	VAL	B	243	68.825	28.177	-0.766	1.00	20.00	6
ATOM	1372	C	VAL	B	243	72.164	27.394	-2.486	1.00	20.00	6
ATOM	1373	O	VAL	B	243	71.894	27.014	-3.628	1.00	20.00	8
ATOM	1374	N	GLY	B	244	73.323	27.137	-1.890	1.00	20.00	7
ATOM	1375	CA	GLY	B	244	74.364	26.385	-2.569	1.00	20.00	6
ATOM	1376	C	GLY	B	244	74.019	24.944	-2.911	1.00	20.00	6
ATOM	1377	O	GLY	B	244	72.867	24.524	-2.810	1.00	20.00	8
ATOM	1378	N	THR	B	245	75.032	24.184	-3.315	1.00	20.00	7
ATOM	1379	CA	THR	B	245	74.858	22.787	-3.691	1.00	20.00	6
ATOM	1380	CB	THR	B	245	76.214	22.161	-4.046	1.00	20.00	6
ATOM	1381	OG1	THR	B	245	76.794	22.911	-5.120	1.00	20.00	8
ATOM	1382	CG2	THR	B	245	76.049	20.710	-4.485	1.00	20.00	6
ATOM	1383	C	THR	B	245	74.174	22.003	-2.579	1.00	20.00	6
ATOM	1384	O	THR	B	245	74.643	21.969	-1.441	1.00	20.00	8

	ATOM	1385	N	ALA	B	246	73.061	21.372	-2.937	1.00	20.00	7
	ATOM	1386	CA	ALA	B	246	72.229	20.615	-2.008	1.00	20.00	6
	ATOM	1387	CB	ALA	B	246	71.266	19.723	-2.793	1.00	20.00	6
	ATOM	1388	C	ALA	B	246	72.936	19.789	-0.941	1.00	20.00	6
5	ATOM	1389	O	ALA	B	246	72.611	19.894	0.239	1.00	20.00	8
	ATOM	1390	N	GLN	B	247	73.902	18.973	-1.339	1.00	20.00	7
	ATOM	1391	CA	GLN	B	247	74.580	18.121	-0.371	1.00	20.00	6
	ATOM	1392	CB	GLN	B	247	75.535	17.168	-1.096	1.00	20.00	6
	ATOM	1393	CG	GLN	B	247	75.110	16.823	-2.520	1.00	20.00	6
10	ATOM	1394	CD	GLN	B	247	75.139	15.336	-2.811	1.00	20.00	6
	ATOM	1395	OE1	GLN	B	247	75.963	14.602	-2.270	1.00	20.00	8
	ATOM	1396	NE2	GLN	B	247	74.246	14.887	-3.686	1.00	20.00	7
	ATOM	1397	C	GLN	B	247	75.343	18.873	0.720	1.00	20.00	6
	ATOM	1398	O	GLN	B	247	75.631	18.306	1.773	1.00	20.00	8
15	ATOM	1399	N	TYR	B	248	75.648	20.147	0.484	1.00	20.00	7
	ATOM	1400	CA	TYR	B	248	76.405	20.941	1.454	1.00	20.00	6
	ATOM	1401	CB	TYR	B	248	77.642	21.531	0.767	1.00	20.00	6
	ATOM	1402	CG	TYR	B	248	78.447	20.471	0.052	1.00	20.00	6
	ATOM	1403	CD1	TYR	B	248	79.329	19.648	0.750	1.00	20.00	6
20	ATOM	1404	CE1	TYR	B	248	79.979	18.589	0.115	1.00	20.00	6
	ATOM	1405	CD2	TYR	B	248	78.243	20.220	-1.306	1.00	20.00	6
	ATOM	1406	CE2	TYR	B	248	78.884	19.167	-1.951	1.00	20.00	6
	ATOM	1407	CZ	TYR	B	248	79.748	18.352	-1.232	1.00	20.00	6
	ATOM	1408	OH	TYR	B	248	80.348	17.280	-1.852	1.00	20.00	8
25	ATOM	1409	C	TYR	B	248	75.596	22.055	2.118	1.00	20.00	6
	ATOM	1410	O	TYR	B	248	76.132	22.824	2.917	1.00	20.00	8
	ATOM	1411	N	VAL	B	249	74.309	22.135	1.798	1.00	20.00	7
	ATOM	1412	CA	VAL	B	249	73.452	23.162	2.376	1.00	20.00	6
	ATOM	1413	CB	VAL	B	249	72.071	23.174	1.695	1.00	20.00	6
30	ATOM	1414	CG1	VAL	B	249	71.117	24.100	2.442	1.00	20.00	6
	ATOM	1415	CG2	VAL	B	249	72.225	23.632	0.264	1.00	20.00	6
	ATOM	1416	C	VAL	B	249	73.262	22.964	3.875	1.00	20.00	6
	ATOM	1417	O	VAL	B	249	73.027	21.847	4.341	1.00	20.00	8
	ATOM	1418	N	SER	B	250	73.373	24.055	4.628	1.00	20.00	7
35	ATOM	1419	CA	SER	B	250	73.206	24.008	6.076	1.00	20.00	6
	ATOM	1420	CB	SER	B	250	73.921	25.198	6.738	1.00	20.00	6
	ATOM	1421	OG	SER	B	250	73.428	26.440	6.257	1.00	20.00	8
	ATOM	1422	C	SER	B	250	71.717	24.049	6.405	1.00	20.00	6
	ATOM	1423	O	SER	B	250	70.920	24.577	5.636	1.00	20.00	8
40	ATOM	1424	N	PRO	B	251	71.322	23.479	7.550	1.00	20.00	7
	ATOM	1425	CD	PRO	B	251	72.130	22.770	8.558	1.00	20.00	6
	ATOM	1426	CA	PRO	B	251	69.905	23.484	7.925	1.00	20.00	6
	ATOM	1427	CB	PRO	B	251	69.892	22.714	9.252	1.00	20.00	6
	ATOM	1428	CG	PRO	B	251	71.290	22.936	9.801	1.00	20.00	6
45	ATOM	1429	C	PRO	B	251	69.265	24.870	8.032	1.00	20.00	6
	ATOM	1430	O	PRO	B	251	68.093	25.036	7.688	1.00	20.00	8
	ATOM	1431	N	GLU	B	252	70.017	25.867	8.492	1.00	20.00	7
	ATOM	1432	CA	GLU	B	252	69.462	27.216	8.625	1.00	20.00	6
	ATOM	1433	CB	GLU	B	252	70.503	28.193	9.196	1.00	20.00	6
50	ATOM	1434	CG	GLU	B	252	71.838	28.180	8.477	1.00	20.00	6
	ATOM	1435	CD	GLU	B	252	72.844	27.257	9.139	1.00	20.00	6
	ATOM	1436	OE1	GLU	B	252	72.429	26.207	9.675	1.00	20.00	8
	ATOM	1437	OE2	GLU	B	252	74.053	27.581	9.118	1.00	20.00	8
	ATOM	1438	C	GLU	B	252	68.928	27.744	7.292	1.00	20.00	6
55	ATOM	1439	O	GLU	B	252	67.927	28.459	7.261	1.00	20.00	8
	ATOM	1440	N	LEU	B	253	69.584	27.395	6.189	1.00	20.00	7
	ATOM	1441	CA	LEU	B	253	69.117	27.850	4.883	1.00	20.00	6
	ATOM	1442	CB	LEU	B	253	70.140	27.527	3.794	1.00	20.00	6
	ATOM	1443	CG	LEU	B	253	71.127	28.635	3.421	1.00	20.00	6

	ATOM	1444	CD1	LEU	B	253	72.121	28.851	4.547	1.00	20.00	6
	ATOM	1445	CD2	LEU	B	253	71.858	28.250	2.140	1.00	20.00	6
	ATOM	1446	C	LEU	B	253	67.774	27.227	4.496	1.00	20.00	6
	ATOM	1447	O	LEU	B	253	66.997	27.826	3.751	1.00	20.00	8
5	ATOM	1448	N	LEU	B	254	67.506	26.029	5.002	1.00	20.00	7
	ATOM	1449	CA	LEU	B	254	66.271	25.316	4.689	1.00	20.00	6
	ATOM	1450	CB	LEU	B	254	66.539	23.809	4.689	1.00	20.00	6
	ATOM	1451	CG	LEU	B	254	67.647	23.322	3.746	1.00	20.00	6
	ATOM	1452	CD1	LEU	B	254	67.983	21.873	4.057	1.00	20.00	6
10	ATOM	1453	CD2	LEU	B	254	67.204	23.475	2.302	1.00	20.00	6
	ATOM	1454	C	LEU	B	254	65.135	25.626	5.662	1.00	20.00	6
	ATOM	1455	O	LEU	B	254	63.959	25.524	5.312	1.00	20.00	8
	ATOM	1456	N	THR	B	255	65.483	26.010	6.883	1.00	20.00	7
	ATOM	1457	CA	THR	B	255	64.472	26.308	7.884	1.00	20.00	6
15	ATOM	1458	CB	THR	B	255	64.876	25.747	9.252	1.00	20.00	6
	ATOM	1459	OG1	THR	B	255	66.154	26.277	9.619	1.00	20.00	8
	ATOM	1460	CG2	THR	B	255	64.958	24.230	9.202	1.00	20.00	6
	ATOM	1461	C	THR	B	255	64.205	27.795	8.035	1.00	20.00	6
	ATOM	1462	O	THR	B	255	63.072	28.241	7.897	1.00	20.00	8
20	ATOM	1463	N	GLU	B	256	65.250	28.560	8.314	1.00	20.00	7
	ATOM	1464	CA	GLU	B	256	65.115	30.001	8.507	1.00	20.00	6
	ATOM	1465	CB	GLU	B	256	66.015	30.444	9.659	1.00	20.00	6
	ATOM	1466	CG	GLU	B	256	65.634	29.818	10.987	1.00	20.00	6
	ATOM	1467	CD	GLU	B	256	66.736	29.922	12.018	1.00	20.00	6
25	ATOM	1468	OE1	GLU	B	256	67.249	31.041	12.232	1.00	20.00	8
	ATOM	1469	OE2	GLU	B	256	67.086	28.884	12.619	1.00	20.00	8
	ATOM	1470	C	GLU	B	256	65.439	30.815	7.262	1.00	20.00	6
	ATOM	1471	O	GLU	B	256	65.268	32.034	7.252	1.00	20.00	8
	ATOM	1472	N	LYS	B	257	65.906	30.141	6.215	1.00	20.00	7
30	ATOM	1473	CA	LYS	B	257	66.260	30.814	4.970	1.00	20.00	6
	ATOM	1474	CB	LYS	B	257	65.015	31.458	4.352	1.00	20.00	6
	ATOM	1475	CG	LYS	B	257	65.184	31.918	2.915	1.00	20.00	6
	ATOM	1476	CD	LYS	B	257	63.885	32.497	2.378	1.00	20.00	6
	ATOM	1477	CE	LYS	B	257	63.994	32.841	0.902	1.00	20.00	6
35	ATOM	1478	NZ	LYS	B	257	65.060	33.847	0.640	1.00	20.00	7
	ATOM	1479	C	LYS	B	257	67.309	31.885	5.263	1.00	20.00	6
	ATOM	1480	O	LYS	B	257	67.270	32.977	4.702	1.00	20.00	8
	ATOM	1481	N	SER	B	258	68.243	31.563	6.152	1.00	20.00	7
	ATOM	1482	CA	SER	B	258	69.300	32.494	6.527	1.00	20.00	6
40	ATOM	1483	CB	SER	B	258	69.043	33.028	7.937	1.00	20.00	6
	ATOM	1484	OG	SER	B	258	68.893	31.962	8.859	1.00	20.00	8
	ATOM	1485	C	SER	B	258	70.675	31.829	6.467	1.00	20.00	6
	ATOM	1486	O	SER	B	258	70.786	30.602	6.542	1.00	20.00	8
	ATOM	1487	N	ALA	B	259	71.718	32.641	6.329	1.00	20.00	7
45	ATOM	1488	CA	ALA	B	259	73.081	32.130	6.252	1.00	20.00	6
	ATOM	1489	CB	ALA	B	259	73.549	32.121	4.809	1.00	20.00	6
	ATOM	1490	C	ALA	B	259	74.031	32.966	7.102	1.00	20.00	6
	ATOM	1491	O	ALA	B	259	73.882	34.185	7.211	1.00	20.00	8
	ATOM	1492	N	CYS	B	260	75.008	32.298	7.704	1.00	20.00	7
50	ATOM	1493	CA	CYS	B	260	75.993	32.960	8.550	1.00	20.00	6
	ATOM	1494	CB	CYS	B	260	75.574	32.865	10.017	1.00	20.00	6
	ATOM	1495	SG	CYS	B	260	75.303	31.165	10.594	1.00	20.00	16
	ATOM	1496	C	CYS	B	260	77.328	32.265	8.349	1.00	20.00	6
	ATOM	1497	O	CYS	B	260	77.410	31.280	7.620	1.00	20.00	8
55	ATOM	1498	N	LYS	B	261	78.371	32.775	8.993	1.00	20.00	7
	ATOM	1499	CA	LYS	B	261	79.691	32.174	8.869	1.00	20.00	6
	ATOM	1500	CB	LYS	B	261	80.676	32.851	9.821	1.00	20.00	6
	ATOM	1501	CG	LYS	B	261	80.985	34.296	9.472	1.00	20.00	6
	ATOM	1502	CD	LYS	B	261	81.961	34.878	10.475	1.00	20.00	6

	ATOM	1503	CE	LYS	B	261	82.157	36.365	10.259	1.00	20.00	6
	ATOM	1504	NZ	LYS	B	261	83.085	36.922	11.278	1.00	20.00	7
	ATOM	1505	C	LYS	B	261	79.632	30.687	9.187	1.00	20.00	6
	ATOM	1506	O	LYS	B	261	80.258	29.877	8.512	1.00	20.00	8
5	ATOM	1507	N	SER	B	262	78.860	30.346	10.214	1.00	20.00	7
	ATOM	1508	CA	SER	B	262	78.716	28.966	10.659	1.00	20.00	6
	ATOM	1509	CB	SER	B	262	77.806	28.913	11.895	1.00	20.00	6
	ATOM	1510	OG	SER	B	262	77.884	27.657	12.546	1.00	20.00	8
	ATOM	1511	C	SER	B	262	78.161	28.070	9.549	1.00	20.00	6
10	ATOM	1512	O	SER	B	262	78.350	26.856	9.575	1.00	20.00	8
	ATOM	1513	N	SER	B	263	77.466	28.660	8.581	1.00	20.00	7
	ATOM	1514	CA	SER	B	263	76.938	27.870	7.472	1.00	20.00	6
	ATOM	1515	CB	SER	B	263	76.132	28.750	6.507	1.00	20.00	6
	ATOM	1516	OG	SER	B	263	75.011	29.329	7.156	1.00	20.00	8
15	ATOM	1517	C	SER	B	263	78.123	27.244	6.737	1.00	20.00	6
	ATOM	1518	O	SER	B	263	78.038	26.108	6.273	1.00	20.00	8
	ATOM	1519	N	ASP	B	264	79.234	27.977	6.642	1.00	20.00	7
	ATOM	1520	CA	ASP	B	264	80.419	27.448	5.961	1.00	20.00	6
	ATOM	1521	CB	ASP	B	264	81.478	28.538	5.745	1.00	20.00	6
20	ATOM	1522	CG	ASP	B	264	81.091	29.539	4.673	1.00	20.00	6
	ATOM	1523	OD1	ASP	B	264	80.286	29.187	3.786	1.00	20.00	8
	ATOM	1524	OD2	ASP	B	264	81.617	30.676	4.704	1.00	20.00	8
	ATOM	1525	C	ASP	B	264	81.043	26.312	6.771	1.00	20.00	6
	ATOM	1526	O	ASP	B	264	81.586	25.365	6.201	1.00	20.00	8
25	ATOM	1527	N	LEU	B	265	80.971	26.415	8.099	1.00	20.00	7
	ATOM	1528	CA	LEU	B	265	81.532	25.390	8.974	1.00	20.00	6
	ATOM	1529	CB	LEU	B	265	81.491	25.848	10.438	1.00	20.00	6
	ATOM	1530	CG	LEU	B	265	82.419	27.035	10.746	1.00	20.00	6
	ATOM	1531	CD1	LEU	B	265	82.204	27.532	12.177	1.00	20.00	6
30	ATOM	1532	CD2	LEU	B	265	83.864	26.608	10.541	1.00	20.00	6
	ATOM	1533	C	LEU	B	265	80.750	24.094	8.800	1.00	20.00	6
	ATOM	1534	O	LEU	B	265	81.306	23.004	8.910	1.00	20.00	8
	ATOM	1535	N	TRP	B	266	79.454	24.208	8.530	1.00	20.00	7
	ATOM	1536	CA	TRP	B	266	78.646	23.017	8.309	1.00	20.00	6
35	ATOM	1537	CB	TRP	B	266	77.167	23.384	8.148	1.00	20.00	6
	ATOM	1538	CG	TRP	B	266	76.310	22.245	7.646	1.00	20.00	6
	ATOM	1539	CD2	TRP	B	266	75.455	21.399	8.426	1.00	20.00	6
	ATOM	1540	CE2	TRP	B	266	74.881	20.455	7.542	1.00	20.00	6
	ATOM	1541	CE3	TRP	B	266	75.117	21.345	9.785	1.00	20.00	6
40	ATOM	1542	CD1	TRP	B	266	76.220	21.792	6.356	1.00	20.00	6
	ATOM	1543	NE1	TRP	B	266	75.365	20.719	6.288	1.00	20.00	7
	ATOM	1544	CZ2	TRP	B	266	73.988	19.466	7.975	1.00	20.00	6
	ATOM	1545	CZ3	TRP	B	266	74.227	20.359	10.216	1.00	20.00	6
	ATOM	1546	CH2	TRP	B	266	73.674	19.434	9.310	1.00	20.00	6
45	ATOM	1547	C	TRP	B	266	79.169	22.356	7.038	1.00	20.00	6
	ATOM	1548	O	TRP	B	266	79.356	21.142	6.988	1.00	20.00	8
	ATOM	1549	N	ALA	B	267	79.411	23.164	6.011	1.00	20.00	7
	ATOM	1550	CA	ALA	B	267	79.930	22.646	4.751	1.00	20.00	6
	ATOM	1551	CB	ALA	B	267	80.089	23.772	3.746	1.00	20.00	6
50	ATOM	1552	C	ALA	B	267	81.277	21.976	5.016	1.00	20.00	6
	ATOM	1553	O	ALA	B	267	81.570	20.914	4.471	1.00	20.00	8
	ATOM	1554	N	LEU	B	268	82.091	22.596	5.864	1.00	20.00	7
	ATOM	1555	CA	LEU	B	268	83.393	22.030	6.209	1.00	20.00	6
	ATOM	1556	CB	LEU	B	268	84.092	22.898	7.264	1.00	20.00	6
55	ATOM	1557	CG	LEU	B	268	85.379	22.332	7.879	1.00	20.00	6
	ATOM	1558	CD1	LEU	B	268	86.442	22.192	6.803	1.00	20.00	6
	ATOM	1559	CD2	LEU	B	268	85.872	23.263	9.006	1.00	20.00	6
	ATOM	1560	C	LEU	B	268	83.193	20.617	6.753	1.00	20.00	6
	ATOM	1561	O	LEU	B	268	83.903	19.684	6.372	1.00	20.00	8

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ATOM   1562  N   GLY B 269      82.220  20.463   7.645  1.00 20.00  7
ATOM   1563  CA  GLY B 269      81.947  19.156   8.217  1.00 20.00  6
ATOM   1564  C   GLY B 269      81.597  18.125   7.156  1.00 20.00  6
ATOM   1565  O   GLY B 269      82.025  16.971   7.239  1.00 20.00  8
ATOM   1566  N   CYS B 270      80.819  18.530   6.155  1.00 20.00  7
ATOM   1567  CA  CYS B 270      80.445  17.613   5.083  1.00 20.00  6
ATOM   1568  CB  CYS B 270      79.413  18.255   4.148  1.00 20.00  6
ATOM   1569  SG  CYS B 270      77.824  18.654   4.905  1.00 20.00 16
ATOM   1570  C   CYS B 270      81.682  17.241   4.265  1.00 20.00  6
ATOM   1571  O   CYS B 270      81.852  16.090   3.866  1.00 20.00  8
ATOM   1572  N   ILE B 271      82.541  18.226   4.012  1.00 20.00  7
ATOM   1573  CA  ILE B 271      83.751  18.000   3.229  1.00 20.00  6
ATOM   1574  CB  ILE B 271      84.436  19.339   2.903  1.00 20.00  6
ATOM   1575  CG2 ILE B 271      85.784  19.098   2.227  1.00 20.00  6
ATOM   1576  CG1 ILE B 271      83.508  20.171   2.007  1.00 20.00  6
ATOM   1577  CD1 ILE B 271      83.962  21.607   1.815  1.00 20.00  6
ATOM   1578  C   ILE B 271      84.729  17.063   3.934  1.00 20.00  6
ATOM   1579  O   ILE B 271      85.300  16.174   3.304  1.00 20.00  8
ATOM   1580  N   ILE B 272      84.927  17.258   5.236  1.00 20.00  7
ATOM   1581  CA  ILE B 272      85.820  16.382   5.987  1.00 20.00  6
ATOM   1582  CB  ILE B 272      85.902  16.790   7.471  1.00 20.00  6
ATOM   1583  CG2 ILE B 272      86.623  15.703   8.277  1.00 20.00  6
ATOM   1584  CG1 ILE B 272      86.646  18.120   7.606  1.00 20.00  6
ATOM   1585  CD1 ILE B 272      86.553  18.723   9.011  1.00 20.00  6
ATOM   1586  C   ILE B 272      85.274  14.957   5.901  1.00 20.00  6
ATOM   1587  O   ILE B 272      86.021  14.003   5.679  1.00 20.00  8
ATOM   1588  N   TYR B 273      83.964  14.822   6.072  1.00 20.00  7
ATOM   1589  CA  TYR B 273      83.324  13.518   6.006  1.00 20.00  6
ATOM   1590  CB  TYR B 273      81.825  13.651   6.287  1.00 20.00  6
ATOM   1591  CG  TYR B 273      81.064  12.340   6.250  1.00 20.00  6
ATOM   1592  CD1 TYR B 273      80.806  11.690   5.041  1.00 20.00  6
ATOM   1593  CE1 TYR B 273      80.107  10.486   5.005  1.00 20.00  6
ATOM   1594  CD2 TYR B 273      80.601  11.750   7.427  1.00 20.00  6
ATOM   1595  CE2 TYR B 273      79.904  10.548   7.405  1.00 20.00  6
ATOM   1596  CZ  TYR B 273      79.659   9.922   6.192  1.00 20.00  6
ATOM   1597  OH  TYR B 273      78.971   8.736   6.174  1.00 20.00  8
ATOM   1598  C   TYR B 273      83.550  12.897   4.632  1.00 20.00  6
ATOM   1599  O   TYR B 273      83.865  11.713   4.526  1.00 20.00  8
ATOM   1600  N   GLN B 274      83.402  13.705   3.586  1.00 20.00  7
ATOM   1601  CA  GLN B 274      83.579  13.230   2.220  1.00 20.00  6
ATOM   1602  CB  GLN B 274      83.176  14.322   1.222  1.00 20.00  6
ATOM   1603  CG  GLN B 274      83.149  13.857  -0.230  1.00 20.00  6
ATOM   1604  CD  GLN B 274      82.558  14.898  -1.169  1.00 20.00  6
ATOM   1605  OE1 GLN B 274      82.108  15.961  -0.736  1.00 20.00  8
ATOM   1606  NE2 GLN B 274      82.548  14.591  -2.462  1.00 20.00  7
ATOM   1607  C   GLN B 274      85.013  12.788   1.953  1.00 20.00  6
ATOM   1608  O   GLN B 274      85.239  11.818   1.233  1.00 20.00  8
ATOM   1609  N   LEU B 275      85.981  13.498   2.528  1.00 20.00  7
ATOM   1610  CA  LEU B 275      87.389  13.143   2.333  1.00 20.00  6
ATOM   1611  CB  LEU B 275      88.311  14.194   2.971  1.00 20.00  6
ATOM   1612  CG  LEU B 275      88.418  15.561   2.284  1.00 20.00  6
ATOM   1613  CD1 LEU B 275      89.325  16.481   3.088  1.00 20.00  6
ATOM   1614  CD2 LEU B 275      88.969  15.379   0.879  1.00 20.00  6
ATOM   1615  C   LEU B 275      87.697  11.779   2.940  1.00 20.00  6
ATOM   1616  O   LEU B 275      88.430  10.981   2.354  1.00 20.00  8
ATOM   1617  N   VAL B 276      87.125  11.519   4.112  1.00 20.00  7
ATOM   1618  CA  VAL B 276      87.353  10.269   4.827  1.00 20.00  6
ATOM   1619  CB  VAL B 276      87.096  10.451   6.342  1.00 20.00  6
ATOM   1620  CG1 VAL B 276      87.376   9.148   7.082  1.00 20.00  6
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ATOM   1621  CG2 VAL B 276      87.973  11.580   6.891  1.00 20.00   6
ATOM   1622  C   VAL B 276      86.504   9.089   4.336  1.00 20.00   6
ATOM   1623  O   VAL B 276      87.005   7.973   4.195  1.00 20.00   8
ATOM   1624  N   ALA B 277      85.222   9.337   4.090  1.00 20.00   7
ATOM   1625  CA  ALA B 277      84.310   8.291   3.643  1.00 20.00   6
ATOM   1626  CB  ALA B 277      82.898   8.597   4.124  1.00 20.00   6
ATOM   1627  C   ALA B 277      84.315   8.115   2.130  1.00 20.00   6
ATOM   1628  O   ALA B 277      84.036   7.029   1.627  1.00 20.00   8
ATOM   1629  N   GLY B 278      84.632   9.180   1.405  1.00 20.00   7
ATOM   1630  CA  GLY B 278      84.653   9.099  -0.041  1.00 20.00   6
ATOM   1631  C   GLY B 278      83.365   9.627  -0.644  1.00 20.00   6
ATOM   1632  O   GLY B 278      83.272   9.817  -1.860  1.00 20.00   8
ATOM   1633  N   LEU B 279      82.375   9.867   0.211  1.00 20.00   7
ATOM   1634  CA  LEU B 279      81.075  10.382  -0.219  1.00 20.00   6
ATOM   1635  CB  LEU B 279      80.070   9.232  -0.375  1.00 20.00   6
ATOM   1636  CG  LEU B 279      80.342   8.114  -1.385  1.00 20.00   6
ATOM   1637  CD1 LEU B 279      79.311   7.009  -1.191  1.00 20.00   6
ATOM   1638  CD2 LEU B 279      80.291   8.660  -2.804  1.00 20.00   6
ATOM   1639  C   LEU B 279      80.522  11.369   0.812  1.00 20.00   6
ATOM   1640  O   LEU B 279      80.750  11.218   2.007  1.00 20.00   8
ATOM   1641  N   PRO B 280      79.787  12.395   0.361  1.00 20.00   7
ATOM   1642  CD  PRO B 280      79.403  12.730  -1.020  1.00 20.00   6
ATOM   1643  CA  PRO B 280      79.230  13.361   1.314  1.00 20.00   6
ATOM   1644  CB  PRO B 280      78.569  14.397   0.407  1.00 20.00   6
ATOM   1645  CG  PRO B 280      78.191  13.598  -0.802  1.00 20.00   6
ATOM   1646  C   PRO B 280      78.242  12.662   2.262  1.00 20.00   6
ATOM   1647  O   PRO B 280      77.666  11.633   1.913  1.00 20.00   8
ATOM   1648  N   PRO B 281      78.035  13.220   3.470  1.00 20.00   7
ATOM   1649  CD  PRO B 281      78.571  14.535   3.859  1.00 20.00   6
ATOM   1650  CA  PRO B 281      77.145  12.701   4.520  1.00 20.00   6
ATOM   1651  CB  PRO B 281      77.262  13.746   5.634  1.00 20.00   6
ATOM   1652  CG  PRO B 281      78.546  14.450   5.344  1.00 20.00   6
ATOM   1653  C   PRO B 281      75.679  12.485   4.142  1.00 20.00   6
ATOM   1654  O   PRO B 281      75.094  11.441   4.442  1.00 20.00   8
ATOM   1655  N   PHE B 282      75.088  13.487   3.504  1.00 20.00   7
ATOM   1656  CA  PHE B 282      73.686  13.427   3.123  1.00 20.00   6
ATOM   1657  CB  PHE B 282      73.006  14.734   3.531  1.00 20.00   6
ATOM   1658  CG  PHE B 282      73.300  15.146   4.947  1.00 20.00   6
ATOM   1659  CD1 PHE B 282      72.624  14.560   6.013  1.00 20.00   6
ATOM   1660  CD2 PHE B 282      74.295  16.085   5.218  1.00 20.00   6
ATOM   1661  CE1 PHE B 282      72.934  14.902   7.331  1.00 20.00   6
ATOM   1662  CE2 PHE B 282      74.613  16.433   6.530  1.00 20.00   6
ATOM   1663  CZ  PHE B 282      73.930  15.840   7.591  1.00 20.00   6
ATOM   1664  C   PHE B 282      73.527  13.191   1.628  1.00 20.00   6
ATOM   1665  O   PHE B 282      73.797  14.079   0.819  1.00 20.00   8
ATOM   1666  N   ARG B 283      73.080  11.994   1.267  1.00 20.00   7
ATOM   1667  CA  ARG B 283      72.888  11.635  -0.134  1.00 20.00   6
ATOM   1668  CB  ARG B 283      73.931  10.598  -0.559  1.00 20.00   6
ATOM   1669  CG  ARG B 283      75.358  10.928  -0.151  1.00 20.00   6
ATOM   1670  CD  ARG B 283      76.326   9.883  -0.687  1.00 20.00   6
ATOM   1671  NE  ARG B 283      76.054   8.555  -0.142  1.00 20.00   7
ATOM   1672  CZ  ARG B 283      76.404   8.159   1.077  1.00 20.00   6
ATOM   1673  NH1 ARG B 283      77.047   8.986   1.893  1.00 20.00   7
ATOM   1674  NH2 ARG B 283      76.108   6.933   1.484  1.00 20.00   7
ATOM   1675  C   ARG B 283      71.493  11.046  -0.331  1.00 20.00   6
ATOM   1676  O   ARG B 283      70.957  10.391   0.563  1.00 20.00   8
ATOM   1677  N   ALA B 284      70.911  11.276  -1.502  1.00 20.00   7
ATOM   1678  CA  ALA B 284      69.579  10.755  -1.796  1.00 20.00   6
ATOM   1679  CB  ALA B 284      68.532  11.484  -0.961  1.00 20.00   6
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ATOM	1680	C	ALA	B	284	69.278	10.921	-3.273	1.00	20.00	6
ATOM	1681	O	ALA	B	284	70.007	11.611	-3.984	1.00	20.00	8
ATOM	1682	N	GLY	B	285	68.191	10.299	-3.722	1.00	20.00	7
ATOM	1683	CA	GLY	B	285	67.807	10.360	-5.122	1.00	20.00	6
ATOM	1684	C	GLY	B	285	67.561	11.737	-5.707	1.00	20.00	6
ATOM	1685	O	GLY	B	285	67.775	11.955	-6.899	1.00	20.00	8
ATOM	1686	N	ASN	B	286	67.089	12.673	-4.892	1.00	20.00	7
ATOM	1687	CA	ASN	B	286	66.835	14.018	-5.386	1.00	20.00	6
ATOM	1688	CB	ASN	B	286	65.403	14.137	-5.930	1.00	20.00	6
ATOM	1689	CG	ASN	B	286	64.342	13.825	-4.885	1.00	20.00	6
ATOM	1690	OD1	ASN	B	286	64.292	14.450	-3.826	1.00	20.00	8
ATOM	1691	ND2	ASN	B	286	63.477	12.861	-5.190	1.00	20.00	7
ATOM	1692	C	ASN	B	286	67.076	15.042	-4.291	1.00	20.00	6
ATOM	1693	O	ASN	B	286	67.368	14.682	-3.152	1.00	20.00	8
ATOM	1694	N	GLU	B	287	66.955	16.317	-4.636	1.00	20.00	7
ATOM	1695	CA	GLU	B	287	67.185	17.377	-3.669	1.00	20.00	6
ATOM	1696	CB	GLU	B	287	67.181	18.738	-4.365	1.00	20.00	6
ATOM	1697	CG	GLU	B	287	68.537	19.095	-4.944	1.00	20.00	6
ATOM	1698	CD	GLU	B	287	68.524	20.385	-5.735	1.00	20.00	6
ATOM	1699	OE1	GLU	B	287	67.911	21.371	-5.267	1.00	20.00	8
ATOM	1700	OE2	GLU	B	287	69.144	20.410	-6.823	1.00	20.00	8
ATOM	1701	C	GLU	B	287	66.225	17.394	-2.492	1.00	20.00	6
ATOM	1702	O	GLU	B	287	66.658	17.554	-1.354	1.00	20.00	8
ATOM	1703	N	TYR	B	288	64.932	17.233	-2.753	1.00	20.00	7
ATOM	1704	CA	TYR	B	288	63.955	17.239	-1.670	1.00	20.00	6
ATOM	1705	CB	TYR	B	288	62.553	16.899	-2.184	1.00	20.00	6
ATOM	1706	CG	TYR	B	288	61.530	16.780	-1.070	1.00	20.00	6
ATOM	1707	CD1	TYR	B	288	60.984	17.917	-0.470	1.00	20.00	6
ATOM	1708	CE1	TYR	B	288	60.090	17.814	0.600	1.00	20.00	6
ATOM	1709	CD2	TYR	B	288	61.154	15.529	-0.573	1.00	20.00	6
ATOM	1710	CE2	TYR	B	288	60.265	15.414	0.498	1.00	20.00	6
ATOM	1711	CZ	TYR	B	288	59.740	16.561	1.078	1.00	20.00	6
ATOM	1712	OH	TYR	B	288	58.884	16.454	2.149	1.00	20.00	8
ATOM	1713	C	TYR	B	288	64.337	16.238	-0.587	1.00	20.00	6
ATOM	1714	O	TYR	B	288	64.254	16.545	0.598	1.00	20.00	8
ATOM	1715	N	LEU	B	289	64.750	15.041	-1.001	1.00	20.00	7
ATOM	1716	CA	LEU	B	289	65.137	13.989	-0.064	1.00	20.00	6
ATOM	1717	CB	LEU	B	289	65.283	12.649	-0.797	1.00	20.00	6
ATOM	1718	CG	LEU	B	289	63.984	11.985	-1.274	1.00	20.00	6
ATOM	1719	CD1	LEU	B	289	64.314	10.802	-2.179	1.00	20.00	6
ATOM	1720	CD2	LEU	B	289	63.160	11.530	-0.068	1.00	20.00	6
ATOM	1721	C	LEU	B	289	66.431	14.310	0.685	1.00	20.00	6
ATOM	1722	O	LEU	B	289	66.604	13.914	1.840	1.00	20.00	8
ATOM	1723	N	ILE	B	290	67.340	15.017	0.025	1.00	20.00	7
ATOM	1724	CA	ILE	B	290	68.597	15.390	0.658	1.00	20.00	6
ATOM	1725	CB	ILE	B	290	69.583	15.985	-0.366	1.00	20.00	6
ATOM	1726	CG2	ILE	B	290	70.778	16.609	0.359	1.00	20.00	6
ATOM	1727	CG1	ILE	B	290	70.046	14.887	-1.330	1.00	20.00	6
ATOM	1728	CD1	ILE	B	290	70.844	15.398	-2.518	1.00	20.00	6
ATOM	1729	C	ILE	B	290	68.307	16.424	1.743	1.00	20.00	6
ATOM	1730	O	ILE	B	290	68.807	16.317	2.862	1.00	20.00	8
ATOM	1731	N	PHE	B	291	67.491	17.420	1.411	1.00	20.00	7
ATOM	1732	CA	PHE	B	291	67.143	18.462	2.372	1.00	20.00	6
ATOM	1733	CB	PHE	B	291	66.222	19.502	1.731	1.00	20.00	6
ATOM	1734	CG	PHE	B	291	66.869	20.289	0.628	1.00	20.00	6
ATOM	1735	CD1	PHE	B	291	68.255	20.420	0.568	1.00	20.00	6
ATOM	1736	CD2	PHE	B	291	66.094	20.931	-0.332	1.00	20.00	6
ATOM	1737	CE1	PHE	B	291	68.859	21.182	-0.435	1.00	20.00	6
ATOM	1738	CE2	PHE	B	291	66.690	21.697	-1.340	1.00	20.00	6

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ATOM   1739  CZ  PHE B 291      68.074  21.822  -1.390  1.00 20.00      6
ATOM   1740  C   PHE B 291      66.453  17.848   3.576  1.00 20.00      6
ATOM   1741  O   PHE B 291      66.664  18.262   4.718  1.00 20.00      8
ATOM   1742  N   GLN B 292      65.629  16.847   3.303  1.00 20.00      7
ATOM   1743  CA  GLN B 292      64.887  16.154   4.341  1.00 20.00      6
ATOM   1744  CB  GLN B 292      64.006  15.090   3.687  1.00 20.00      6
ATOM   1745  CG  GLN B 292      62.953  14.486   4.572  1.00 20.00      6
ATOM   1746  CD  GLN B 292      61.895  13.750   3.763  1.00 20.00      6
ATOM   1747  OE1 GLN B 292      62.208  12.835   2.997  1.00 20.00      8
ATOM   1748  NE2 GLN B 292      60.637  14.155   3.924  1.00 20.00      7
ATOM   1749  C   GLN B 292      65.865  15.522   5.329  1.00 20.00      6
ATOM   1750  O   GLN B 292      65.689  15.630   6.540  1.00 20.00      8
ATOM   1751  N   LYS B 293      66.907  14.875   4.812  1.00 20.00      7
ATOM   1752  CA  LYS B 293      67.898  14.244   5.683  1.00 20.00      6
ATOM   1753  CB  LYS B 293      68.850  13.372   4.865  1.00 20.00      6
ATOM   1754  CG  LYS B 293      68.197  12.135   4.278  1.00 20.00      6
ATOM   1755  CD  LYS B 293      69.217  11.260   3.554  1.00 20.00      6
ATOM   1756  CE  LYS B 293      68.575   9.972   3.051  1.00 20.00      6
ATOM   1757  NZ  LYS B 293      69.553   9.099   2.339  1.00 20.00      7
ATOM   1758  C   LYS B 293      68.698  15.287   6.468  1.00 20.00      6
ATOM   1759  O   LYS B 293      69.044  15.074   7.634  1.00 20.00      8
ATOM   1760  N   ILE B 294      68.989  16.411   5.827  1.00 20.00      7
ATOM   1761  CA  ILE B 294      69.745  17.480   6.472  1.00 20.00      6
ATOM   1762  CB  ILE B 294      70.026  18.632   5.474  1.00 20.00      6
ATOM   1763  CG2 ILE B 294      70.489  19.881   6.223  1.00 20.00      6
ATOM   1764  CG1 ILE B 294      71.070  18.178   4.443  1.00 20.00      6
ATOM   1765  CD1 ILE B 294      71.266  19.159   3.303  1.00 20.00      6
ATOM   1766  C   ILE B 294      69.035  18.045   7.712  1.00 20.00      6
ATOM   1767  O   ILE B 294      69.618  18.091   8.798  1.00 20.00      8
ATOM   1768  N   ILE B 295      67.783  18.467   7.564  1.00 20.00      7
ATOM   1769  CA  ILE B 295      67.068  19.037   8.707  1.00 20.00      6
ATOM   1770  CB  ILE B 295      65.710  19.647   8.300  1.00 20.00      6
ATOM   1771  CG2 ILE B 295      65.927  20.749   7.265  1.00 20.00      6
ATOM   1772  CG1 ILE B 295      64.784  18.559   7.762  1.00 20.00      6
ATOM   1773  CD1 ILE B 295      63.356  19.037   7.558  1.00 20.00      6
ATOM   1774  C   ILE B 295      66.831  18.045   9.842  1.00 20.00      6
ATOM   1775  O   ILE B 295      66.540  18.447  10.967  1.00 20.00      8
ATOM   1776  N   LYS B 296      66.956  16.753   9.550  1.00 20.00      7
ATOM   1777  CA  LYS B 296      66.765  15.724  10.569  1.00 20.00      6
ATOM   1778  CB  LYS B 296      65.907  14.576  10.019  1.00 20.00      6
ATOM   1779  CG  LYS B 296      64.535  15.010   9.538  1.00 20.00      6
ATOM   1780  CD  LYS B 296      63.739  13.851   8.951  1.00 20.00      6
ATOM   1781  CE  LYS B 296      63.296  12.873  10.025  1.00 20.00      6
ATOM   1782  NZ  LYS B 296      62.375  11.828   9.482  1.00 20.00      7
ATOM   1783  C   LYS B 296      68.116  15.176  11.018  1.00 20.00      6
ATOM   1784  O   LYS B 296      68.178  14.261  11.838  1.00 20.00      8
ATOM   1785  N   LEU B 297      69.190  15.746  10.474  1.00 20.00      7
ATOM   1786  CA  LEU B 297      70.551  15.320  10.791  1.00 20.00      6
ATOM   1787  CB  LEU B 297      70.911  15.680  12.236  1.00 20.00      6
ATOM   1788  CG  LEU B 297      72.398  15.538  12.585  1.00 20.00      6
ATOM   1789  CD1 LEU B 297      73.215  16.555  11.771  1.00 20.00      6
ATOM   1790  CD2 LEU B 297      72.605  15.762  14.076  1.00 20.00      6
ATOM   1791  C   LEU B 297      70.635  13.810  10.592  1.00 20.00      6
ATOM   1792  O   LEU B 297      71.150  13.080  11.434  1.00 20.00      8
ATOM   1793  N   GLU B 298      70.128  13.351   9.456  1.00 20.00      7
ATOM   1794  CA  GLU B 298      70.115  11.934   9.148  1.00 20.00      6
ATOM   1795  CB  GLU B 298      68.817  11.597   8.416  1.00 20.00      6
ATOM   1796  CG  GLU B 298      68.568  10.123   8.233  1.00 20.00      6
ATOM   1797  CD  GLU B 298      67.254   9.858   7.535  1.00 20.00      6
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	ATOM	1798	OE1	GLU	B	298	66.214	10.331	8.043	1.00	20.00	8
	ATOM	1799	OE2	GLU	B	298	67.261	9.185	6.484	1.00	20.00	8
	ATOM	1800	C	GLU	B	298	71.309	11.446	8.332	1.00	20.00	6
	ATOM	1801	O	GLU	B	298	71.310	11.523	7.104	1.00	20.00	8
5	ATOM	1802	N	TYR	B	299	72.325	10.946	9.027	1.00	20.00	7
	ATOM	1803	CA	TYR	B	299	73.519	10.405	8.390	1.00	20.00	6
	ATOM	1804	CB	TYR	B	299	74.444	11.521	7.880	1.00	20.00	6
	ATOM	1805	CG	TYR	B	299	75.330	12.130	8.953	1.00	20.00	6
	ATOM	1806	CD1	TYR	B	299	74.796	12.962	9.935	1.00	20.00	6
10	ATOM	1807	CE1	TYR	B	299	75.589	13.482	10.951	1.00	20.00	6
	ATOM	1808	CD2	TYR	B	299	76.692	11.833	9.013	1.00	20.00	6
	ATOM	1809	CE2	TYR	B	299	77.499	12.352	10.032	1.00	20.00	6
	ATOM	1810	CZ	TYR	B	299	76.935	13.173	10.995	1.00	20.00	6
	ATOM	1811	OH	TYR	B	299	77.701	13.687	12.006	1.00	20.00	8
15	ATOM	1812	C	TYR	B	299	74.245	9.600	9.456	1.00	20.00	6
	ATOM	1813	O	TYR	B	299	73.913	9.688	10.631	1.00	20.00	8
	ATOM	1814	N	ASP	B	300	75.229	8.808	9.052	1.00	20.00	7
	ATOM	1815	CA	ASP	B	300	75.991	8.030	10.016	1.00	20.00	6
	ATOM	1816	CB	ASP	B	300	75.291	6.700	10.304	1.00	20.00	6
20	ATOM	1817	CG	ASP	B	300	74.898	5.968	9.048	1.00	20.00	6
	ATOM	1818	OD1	ASP	B	300	75.806	5.594	8.274	1.00	20.00	8
	ATOM	1819	OD2	ASP	B	300	73.681	5.771	8.832	1.00	20.00	8
	ATOM	1820	C	ASP	B	300	77.397	7.799	9.488	1.00	20.00	6
	ATOM	1821	O	ASP	B	300	77.651	7.976	8.297	1.00	20.00	8
25	ATOM	1822	N	PHE	B	301	78.307	7.417	10.378	1.00	20.00	7
	ATOM	1823	CA	PHE	B	301	79.695	7.186	9.996	1.00	20.00	6
	ATOM	1824	CB	PHE	B	301	80.655	7.664	11.093	1.00	20.00	6
	ATOM	1825	CG	PHE	B	301	80.488	9.103	11.481	1.00	20.00	6
	ATOM	1826	CD1	PHE	B	301	79.493	9.487	12.370	1.00	20.00	6
30	ATOM	1827	CD2	PHE	B	301	81.346	10.075	10.970	1.00	20.00	6
	ATOM	1828	CE1	PHE	B	301	79.352	10.823	12.750	1.00	20.00	6
	ATOM	1829	CE2	PHE	B	301	81.214	11.408	11.342	1.00	20.00	6
	ATOM	1830	CZ	PHE	B	301	80.215	11.783	12.235	1.00	20.00	6
	ATOM	1831	C	PHE	B	301	80.009	5.722	9.744	1.00	20.00	6
35	ATOM	1832	O	PHE	B	301	79.506	4.839	10.442	1.00	20.00	8
	ATOM	1833	N	PRO	B	302	80.842	5.440	8.732	1.00	20.00	7
	ATOM	1834	CD	PRO	B	302	81.330	6.316	7.654	1.00	20.00	6
	ATOM	1835	CA	PRO	B	302	81.191	4.044	8.466	1.00	20.00	6
	ATOM	1836	CB	PRO	B	302	81.838	4.105	7.084	1.00	20.00	6
40	ATOM	1837	CG	PRO	B	302	82.425	5.479	7.046	1.00	20.00	6
	ATOM	1838	C	PRO	B	302	82.168	3.629	9.569	1.00	20.00	6
	ATOM	1839	O	PRO	B	302	82.887	4.469	10.111	1.00	20.00	8
	ATOM	1840	N	ALA	B	303	82.185	2.345	9.908	1.00	20.00	7
	ATOM	1841	CA	ALA	B	303	83.052	1.836	10.968	1.00	20.00	6
45	ATOM	1842	CB	ALA	B	303	82.993	0.310	10.987	1.00	20.00	6
	ATOM	1843	C	ALA	B	303	84.513	2.294	10.939	1.00	20.00	6
	ATOM	1844	O	ALA	B	303	85.078	2.637	11.979	1.00	20.00	8
	ATOM	1845	N	ALA	B	304	85.121	2.306	9.756	1.00	20.00	7
	ATOM	1846	CA	ALA	B	304	86.527	2.684	9.605	1.00	20.00	6
50	ATOM	1847	CB	ALA	B	304	86.971	2.423	8.165	1.00	20.00	6
	ATOM	1848	C	ALA	B	304	86.894	4.119	10.001	1.00	20.00	6
	ATOM	1849	O	ALA	B	304	87.983	4.367	10.520	1.00	20.00	8
	ATOM	1850	N	PHE	B	305	85.985	5.053	9.742	1.00	20.00	7
	ATOM	1851	CA	PHE	B	305	86.183	6.473	10.034	1.00	20.00	6
55	ATOM	1852	CB	PHE	B	305	84.822	7.115	10.312	1.00	20.00	6
	ATOM	1853	CG	PHE	B	305	84.705	8.522	9.815	1.00	20.00	6
	ATOM	1854	CD1	PHE	B	305	85.303	9.572	10.502	1.00	20.00	6
	ATOM	1855	CD2	PHE	B	305	84.003	8.800	8.646	1.00	20.00	6
	ATOM	1856	CE1	PHE	B	305	85.202	10.881	10.033	1.00	20.00	6

	ATOM	1857	CE2	PHE	B	305	83.896	10.106	8.167	1.00	20.00	6
	ATOM	1858	CZ	PHE	B	305	84.496	11.147	8.862	1.00	20.00	6
	ATOM	1859	C	PHE	B	305	87.153	6.789	11.182	1.00	20.00	6
	ATOM	1860	O	PHE	B	305	86.964	6.342	12.312	1.00	20.00	8
	ATOM	1861	N	PHE	B	306	88.190	7.565	10.883	1.00	20.00	7
	ATOM	1862	CA	PHE	B	306	89.176	7.945	11.894	1.00	20.00	6
	ATOM	1863	CB	PHE	B	306	90.179	8.936	11.295	1.00	20.00	6
	ATOM	1864	CG	PHE	B	306	90.695	8.531	9.940	1.00	20.00	6
	ATOM	1865	CD1	PHE	B	306	91.292	7.284	9.747	1.00	20.00	6
	ATOM	1866	CD2	PHE	B	306	90.588	9.395	8.853	1.00	20.00	6
	ATOM	1867	CE1	PHE	B	306	91.774	6.906	8.490	1.00	20.00	6
	ATOM	1868	CE2	PHE	B	306	91.067	9.027	7.590	1.00	20.00	6
	ATOM	1869	CZ	PHE	B	306	91.662	7.780	7.408	1.00	20.00	6
	ATOM	1870	C	PHE	B	306	88.445	8.575	13.086	1.00	20.00	6
	ATOM	1871	O	PHE	B	306	87.731	9.566	12.936	1.00	20.00	8
	ATOM	1872	N	PRO	B	307	88.614	7.995	14.288	1.00	20.00	7
	ATOM	1873	CD	PRO	B	307	89.482	6.834	14.555	1.00	20.00	6
	ATOM	1874	CA	PRO	B	307	87.983	8.459	15.530	1.00	20.00	6
	ATOM	1875	CB	PRO	B	307	88.748	7.691	16.606	1.00	20.00	6
	ATOM	1876	CG	PRO	B	307	89.018	6.388	15.928	1.00	20.00	6
	ATOM	1877	C	PRO	B	307	87.986	9.965	15.784	1.00	20.00	6
	ATOM	1878	O	PRO	B	307	86.936	10.565	16.025	1.00	20.00	8
	ATOM	1879	N	LYS	B	308	89.162	10.575	15.745	1.00	20.00	7
	ATOM	1880	CA	LYS	B	308	89.260	12.004	15.992	1.00	20.00	6
	ATOM	1881	CB	LYS	B	308	90.728	12.405	16.149	1.00	20.00	6
	ATOM	1882	CG	LYS	B	308	91.338	11.805	17.410	1.00	20.00	6
	ATOM	1883	CD	LYS	B	308	92.806	12.140	17.591	1.00	20.00	6
	ATOM	1884	CE	LYS	B	308	93.339	11.457	18.847	1.00	20.00	6
	ATOM	1885	NZ	LYS	B	308	94.816	11.573	18.985	1.00	20.00	7
	ATOM	1886	C	LYS	B	308	88.572	12.808	14.894	1.00	20.00	6
	ATOM	1887	O	LYS	B	308	87.985	13.855	15.167	1.00	20.00	8
	ATOM	1888	N	ALA	B	309	88.629	12.318	13.659	1.00	20.00	7
	ATOM	1889	CA	ALA	B	309	87.967	13.011	12.557	1.00	20.00	6
	ATOM	1890	CB	ALA	B	309	88.328	12.369	11.231	1.00	20.00	6
	ATOM	1891	C	ALA	B	309	86.460	12.936	12.787	1.00	20.00	6
	ATOM	1892	O	ALA	B	309	85.735	13.903	12.552	1.00	20.00	8
	ATOM	1893	N	ARG	B	310	85.986	11.780	13.246	1.00	20.00	7
	ATOM	1894	CA	ARG	B	310	84.561	11.619	13.513	1.00	20.00	6
	ATOM	1895	CB	ARG	B	310	84.246	10.194	13.979	1.00	20.00	6
	ATOM	1896	CG	ARG	B	310	82.844	10.069	14.561	1.00	20.00	6
	ATOM	1897	CD	ARG	B	310	82.408	8.632	14.789	1.00	20.00	6
	ATOM	1898	NE	ARG	B	310	81.060	8.593	15.355	1.00	20.00	7
	ATOM	1899	CZ	ARG	B	310	80.259	7.532	15.328	1.00	20.00	6
	ATOM	1900	NH1	ARG	B	310	80.665	6.401	14.759	1.00	20.00	7
	ATOM	1901	NH2	ARG	B	310	79.048	7.601	15.867	1.00	20.00	7
	ATOM	1902	C	ARG	B	310	84.110	12.613	14.583	1.00	20.00	6
	ATOM	1903	O	ARG	B	310	83.080	13.274	14.436	1.00	20.00	8
	ATOM	1904	N	ASP	B	311	84.876	12.707	15.666	1.00	20.00	7
	ATOM	1905	CA	ASP	B	311	84.535	13.629	16.740	1.00	20.00	6
	ATOM	1906	CB	ASP	B	311	85.574	13.555	17.864	1.00	20.00	6
	ATOM	1907	CG	ASP	B	311	85.260	14.505	19.006	1.00	20.00	6
	ATOM	1908	OD1	ASP	B	311	85.782	15.636	19.010	1.00	20.00	8
	ATOM	1909	OD2	ASP	B	311	84.480	14.124	19.901	1.00	20.00	8
	ATOM	1910	C	ASP	B	311	84.445	15.054	16.198	1.00	20.00	6
	ATOM	1911	O	ASP	B	311	83.539	15.800	16.564	1.00	20.00	8
	ATOM	1912	N	LEU	B	312	85.371	15.423	15.313	1.00	20.00	7
	ATOM	1913	CA	LEU	B	312	85.362	16.769	14.736	1.00	20.00	6
	ATOM	1914	CB	LEU	B	312	86.604	16.999	13.869	1.00	20.00	6
	ATOM	1915	CG	LEU	B	312	86.662	18.329	13.099	1.00	20.00	6

	ATOM	1916	CD1	LEU	B	312	86.424	19.510	14.037	1.00	20.00	6
	ATOM	1917	CD2	LEU	B	312	88.018	18.450	12.414	1.00	20.00	6
	ATOM	1918	C	LEU	B	312	84.112	17.008	13.899	1.00	20.00	6
	ATOM	1919	O	LEU	B	312	83.456	18.039	14.035	1.00	20.00	8
5	ATOM	1920	N	VAL	B	313	83.786	16.051	13.033	1.00	20.00	7
	ATOM	1921	CA	VAL	B	313	82.611	16.171	12.183	1.00	20.00	6
	ATOM	1922	CB	VAL	B	313	82.464	14.942	11.255	1.00	20.00	6
	ATOM	1923	CG1	VAL	B	313	81.121	14.973	10.551	1.00	20.00	6
	ATOM	1924	CG2	VAL	B	313	83.595	14.935	10.228	1.00	20.00	6
10	ATOM	1925	C	VAL	B	313	81.354	16.315	13.036	1.00	20.00	6
	ATOM	1926	O	VAL	B	313	80.467	17.111	12.716	1.00	20.00	8
	ATOM	1927	N	GLU	B	314	81.282	15.559	14.129	1.00	20.00	7
	ATOM	1928	CA	GLU	B	314	80.122	15.634	15.010	1.00	20.00	6
	ATOM	1929	CB	GLU	B	314	80.191	14.545	16.084	1.00	20.00	6
15	ATOM	1930	CG	GLU	B	314	80.160	13.131	15.521	1.00	20.00	6
	ATOM	1931	CD	GLU	B	314	80.222	12.073	16.603	1.00	20.00	6
	ATOM	1932	OE1	GLU	B	314	81.033	12.227	17.542	1.00	20.00	8
	ATOM	1933	OE2	GLU	B	314	79.469	11.081	16.512	1.00	20.00	8
	ATOM	1934	C	GLU	B	314	80.035	17.005	15.664	1.00	20.00	6
20	ATOM	1935	O	GLU	B	314	78.960	17.443	16.059	1.00	20.00	8
	ATOM	1936	N	LYS	B	315	81.165	17.690	15.776	1.00	20.00	7
	ATOM	1937	CA	LYS	B	315	81.154	19.010	16.383	1.00	20.00	6
	ATOM	1938	CB	LYS	B	315	82.448	19.240	17.168	1.00	20.00	6
	ATOM	1939	CG	LYS	B	315	82.460	18.478	18.493	1.00	20.00	6
25	ATOM	1940	CD	LYS	B	315	83.803	18.529	19.198	1.00	20.00	6
	ATOM	1941	CE	LYS	B	315	83.749	17.825	20.552	1.00	20.00	6
	ATOM	1942	NZ	LYS	B	315	82.829	18.505	21.506	1.00	20.00	7
	ATOM	1943	C	LYS	B	315	80.934	20.104	15.343	1.00	20.00	6
	ATOM	1944	O	LYS	B	315	80.855	21.282	15.686	1.00	20.00	8
30	ATOM	1945	N	LEU	B	316	80.819	19.706	14.075	1.00	20.00	7
	ATOM	1946	CA	LEU	B	316	80.577	20.649	12.979	1.00	20.00	6
	ATOM	1947	CB	LEU	B	316	81.608	20.450	11.863	1.00	20.00	6
	ATOM	1948	CG	LEU	B	316	83.044	20.833	12.240	1.00	20.00	6
	ATOM	1949	CD1	LEU	B	316	84.011	20.365	11.156	1.00	20.00	6
35	ATOM	1950	CD2	LEU	B	316	83.124	22.351	12.434	1.00	20.00	6
	ATOM	1951	C	LEU	B	316	79.164	20.469	12.415	1.00	20.00	6
	ATOM	1952	O	LEU	B	316	78.464	21.448	12.148	1.00	20.00	8
	ATOM	1953	N	LEU	B	317	78.746	19.220	12.230	1.00	20.00	7
	ATOM	1954	CA	LEU	B	317	77.403	18.962	11.721	1.00	20.00	6
40	ATOM	1955	CB	LEU	B	317	77.343	17.605	11.012	1.00	20.00	6
	ATOM	1956	CG	LEU	B	317	78.335	17.445	9.852	1.00	20.00	6
	ATOM	1957	CD1	LEU	B	317	78.091	16.111	9.143	1.00	20.00	6
	ATOM	1958	CD2	LEU	B	317	78.182	18.603	8.866	1.00	20.00	6
	ATOM	1959	C	LEU	B	317	76.435	19.000	12.899	1.00	20.00	6
45	ATOM	1960	O	LEU	B	317	75.979	17.966	13.398	1.00	20.00	8
	ATOM	1961	N	VAL	B	318	76.156	20.215	13.354	1.00	20.00	7
	ATOM	1962	CA	VAL	B	318	75.251	20.451	14.467	1.00	20.00	6
	ATOM	1963	CB	VAL	B	318	75.981	21.164	15.625	1.00	20.00	6
	ATOM	1964	CG1	VAL	B	318	75.007	21.461	16.759	1.00	20.00	6
50	ATOM	1965	CG2	VAL	B	318	77.136	20.300	16.115	1.00	20.00	6
	ATOM	1966	C	VAL	B	318	74.140	21.344	13.936	1.00	20.00	6
	ATOM	1967	O	VAL	B	318	74.410	22.386	13.333	1.00	20.00	8
	ATOM	1968	N	LEU	B	319	72.892	20.941	14.153	1.00	20.00	7
	ATOM	1969	CA	LEU	B	319	71.758	21.717	13.663	1.00	20.00	6
55	ATOM	1970	CB	LEU	B	319	70.444	21.056	14.093	1.00	20.00	6
	ATOM	1971	CG	LEU	B	319	70.211	19.647	13.533	1.00	20.00	6
	ATOM	1972	CD1	LEU	B	319	68.883	19.098	14.060	1.00	20.00	6
	ATOM	1973	CD2	LEU	B	319	70.211	19.688	12.000	1.00	20.00	6
	ATOM	1974	C	LEU	B	319	71.794	23.173	14.119	1.00	20.00	6

	ATOM	1975	O	LEU	B	319	71.591	24.082	13.317	1.00	20.00	8
	ATOM	1976	N	ASP	B	320	72.052	23.394	15.405	1.00	20.00	7
	ATOM	1977	CA	ASP	B	320	72.119	24.745	15.958	1.00	20.00	6
	ATOM	1978	CB	ASP	B	320	72.091	24.687	17.490	1.00	20.00	6
5	ATOM	1979	CG	ASP	B	320	72.058	26.061	18.129	1.00	20.00	6
	ATOM	1980	OD1	ASP	B	320	72.506	27.036	17.492	1.00	20.00	8
	ATOM	1981	OD2	ASP	B	320	71.595	26.166	19.284	1.00	20.00	8
	ATOM	1982	C	ASP	B	320	73.415	25.419	15.492	1.00	20.00	6
	ATOM	1983	O	ASP	B	320	74.496	25.089	15.965	1.00	20.00	8
10	ATOM	1984	N	ALA	B	321	73.294	26.372	14.576	1.00	20.00	7
	ATOM	1985	CA	ALA	B	321	74.450	27.078	14.028	1.00	20.00	6
	ATOM	1986	CB	ALA	B	321	73.982	28.109	13.006	1.00	20.00	6
	ATOM	1987	C	ALA	B	321	75.359	27.747	15.065	1.00	20.00	6
	ATOM	1988	O	ALA	B	321	76.535	27.992	14.790	1.00	20.00	8
15	ATOM	1989	N	THR	B	322	74.829	28.035	16.252	1.00	20.00	7
	ATOM	1990	CA	THR	B	322	75.631	28.681	17.292	1.00	20.00	6
	ATOM	1991	CB	THR	B	322	74.755	29.491	18.271	1.00	20.00	6
	ATOM	1992	OG1	THR	B	322	73.879	28.605	18.973	1.00	20.00	8
	ATOM	1993	CG2	THR	B	322	73.928	30.527	17.519	1.00	20.00	6
20	ATOM	1994	C	THR	B	322	76.437	27.684	18.108	1.00	20.00	6
	ATOM	1995	O	THR	B	322	77.166	28.071	19.019	1.00	20.00	8
	ATOM	1996	N	LYS	B	323	76.312	26.401	17.786	1.00	20.00	7
	ATOM	1997	CA	LYS	B	323	77.048	25.378	18.517	1.00	20.00	6
	ATOM	1998	CB	LYS	B	323	76.080	24.378	19.155	1.00	20.00	6
25	ATOM	1999	CG	LYS	B	323	75.180	24.992	20.209	1.00	20.00	6
	ATOM	2000	CD	LYS	B	323	74.356	23.931	20.924	1.00	20.00	6
	ATOM	2001	CE	LYS	B	323	73.406	24.574	21.927	1.00	20.00	6
	ATOM	2002	NZ	LYS	B	323	74.144	25.514	22.818	1.00	20.00	7
	ATOM	2003	C	LYS	B	323	78.066	24.631	17.664	1.00	20.00	6
30	ATOM	2004	O	LYS	B	323	78.520	23.557	18.040	1.00	20.00	8
	ATOM	2005	N	ARG	B	324	78.427	25.195	16.517	1.00	20.00	7
	ATOM	2006	CA	ARG	B	324	79.408	24.545	15.656	1.00	20.00	6
	ATOM	2007	CB	ARG	B	324	79.108	24.834	14.186	1.00	20.00	6
	ATOM	2008	CG	ARG	B	324	77.824	24.177	13.728	1.00	20.00	6
35	ATOM	2009	CD	ARG	B	324	77.468	24.505	12.297	1.00	20.00	6
	ATOM	2010	NE	ARG	B	324	76.060	24.202	12.069	1.00	20.00	7
	ATOM	2011	CZ	ARG	B	324	75.277	24.873	11.233	1.00	20.00	6
	ATOM	2012	NH1	ARG	B	324	75.764	25.888	10.523	1.00	20.00	7
	ATOM	2013	NH2	ARG	B	324	73.992	24.551	11.140	1.00	20.00	7
40	ATOM	2014	C	ARG	B	324	80.811	25.011	16.008	1.00	20.00	6
	ATOM	2015	O	ARG	B	324	81.070	26.212	16.131	1.00	20.00	8
	ATOM	2016	N	LEU	B	325	81.711	24.049	16.180	1.00	20.00	7
	ATOM	2017	CA	LEU	B	325	83.090	24.350	16.520	1.00	20.00	6
	ATOM	2018	CB	LEU	B	325	83.913	23.061	16.550	1.00	20.00	6
45	ATOM	2019	CG	LEU	B	325	85.274	23.123	17.241	1.00	20.00	6
	ATOM	2020	CD1	LEU	B	325	85.093	23.591	18.682	1.00	20.00	6
	ATOM	2021	CD2	LEU	B	325	85.922	21.741	17.209	1.00	20.00	6
	ATOM	2022	C	LEU	B	325	83.656	25.310	15.481	1.00	20.00	6
	ATOM	2023	O	LEU	B	325	83.649	25.015	14.282	1.00	20.00	8
50	ATOM	2024	N	GLY	B	326	84.139	26.461	15.946	1.00	20.00	7
	ATOM	2025	CA	GLY	B	326	84.697	27.449	15.040	1.00	20.00	6
	ATOM	2026	C	GLY	B	326	83.857	28.711	14.932	1.00	20.00	6
	ATOM	2027	O	GLY	B	326	84.369	29.757	14.529	1.00	20.00	8
	ATOM	2028	N	CYS	B	327	82.575	28.632	15.286	1.00	20.00	7
55	ATOM	2029	CA	CYS	B	327	81.714	29.806	15.200	1.00	20.00	6
	ATOM	2030	CB	CYS	B	327	80.233	29.404	15.183	1.00	20.00	6
	ATOM	2031	SG	CYS	B	327	79.534	28.915	16.774	1.00	20.00	16
	ATOM	2032	C	CYS	B	327	81.976	30.772	16.353	1.00	20.00	6
	ATOM	2033	O	CYS	B	327	82.565	30.410	17.371	1.00	20.00	8

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ATOM   2034  N   GLU B 328      81.523  32.005  16.178  1.00 20.00  7
ATOM   2035  CA  GLU B 328      81.714  33.052  17.167  1.00 20.00  6
ATOM   2036  CB  GLU B 328      81.087  34.348  16.632  1.00 20.00  6
ATOM   2037  CG  GLU B 328      81.734  34.772  15.300  1.00 20.00  6
ATOM   2038  CD  GLU B 328      80.962  35.842  14.539  1.00 20.00  6
ATOM   2039  OE1 GLU B 328      79.738  35.676  14.343  1.00 20.00  8
ATOM   2040  OE2 GLU B 328      81.588  36.840  14.116  1.00 20.00  8
ATOM   2041  C   GLU B 328      81.187  32.701  18.560  1.00 20.00  6
ATOM   2042  O   GLU B 328      81.850  32.983  19.562  1.00 20.00  8
ATOM   2043  N   GLU B 329      80.016  32.073  18.631  1.00 20.00  7
ATOM   2044  CA  GLU B 329      79.449  31.714  19.926  1.00 20.00  6
ATOM   2045  CB  GLU B 329      77.991  31.263  19.782  1.00 20.00  6
ATOM   2046  CG  GLU B 329      77.028  32.355  19.315  1.00 20.00  6
ATOM   2047  CD  GLU B 329      77.055  32.575  17.813  1.00 20.00  6
ATOM   2048  OE1 GLU B 329      77.859  31.910  17.120  1.00 20.00  8
ATOM   2049  OE2 GLU B 329      76.267  33.413  17.323  1.00 20.00  8
ATOM   2050  C   GLU B 329      80.264  30.616  20.605  1.00 20.00  6
ATOM   2051  O   GLU B 329      80.182  30.436  21.819  1.00 20.00  8
ATOM   2052  N   MET B 330      81.040  29.878  19.816  1.00 20.00  7
ATOM   2053  CA  MET B 330      81.880  28.813  20.354  1.00 20.00  6
ATOM   2054  CB  MET B 330      81.872  27.600  19.419  1.00 20.00  6
ATOM   2055  CG  MET B 330      80.552  26.822  19.436  1.00 20.00  6
ATOM   2056  SD  MET B 330      80.117  26.254  21.104  1.00 20.00 16
ATOM   2057  CE  MET B 330      81.265  24.895  21.311  1.00 20.00  6
ATOM   2058  C   MET B 330      83.302  29.330  20.547  1.00 20.00  6
ATOM   2059  O   MET B 330      84.236  28.564  20.754  1.00 20.00  8
ATOM   2060  N   GLU B 331      83.443  30.647  20.471  1.00 20.00  7
ATOM   2061  CA  GLU B 331      84.716  31.338  20.656  1.00 20.00  6
ATOM   2062  CB  GLU B 331      85.357  30.921  21.987  1.00 20.00  6
ATOM   2063  CG  GLU B 331      84.371  30.886  23.163  1.00 20.00  6
ATOM   2064  CD  GLU B 331      83.478  32.127  23.270  1.00 20.00  6
ATOM   2065  OE1 GLU B 331      82.483  32.064  24.021  1.00 20.00  8
ATOM   2066  OE2 GLU B 331      83.759  33.159  22.625  1.00 20.00  8
ATOM   2067  C   GLU B 331      85.742  31.247  19.523  1.00 20.00  6
ATOM   2068  O   GLU B 331      86.952  31.264  19.761  1.00 20.00  8
ATOM   2069  N   GLY B 332      85.257  31.137  18.292  1.00 20.00  7
ATOM   2070  CA  GLY B 332      86.145  31.159  17.140  1.00 20.00  6
ATOM   2071  C   GLY B 332      87.036  30.014  16.721  1.00 20.00  6
ATOM   2072  O   GLY B 332      86.881  28.863  17.142  1.00 20.00  8
ATOM   2073  N   TYR B 333      88.002  30.366  15.875  1.00 20.00  7
ATOM   2074  CA  TYR B 333      88.939  29.413  15.307  1.00 20.00  6
ATOM   2075  CB  TYR B 333      89.625  30.053  14.093  1.00 20.00  6
ATOM   2076  CG  TYR B 333      88.724  30.031  12.877  1.00 20.00  6
ATOM   2077  CD1 TYR B 333      88.774  28.966  11.974  1.00 20.00  6
ATOM   2078  CE1 TYR B 333      87.872  28.869  10.919  1.00 20.00  6
ATOM   2079  CD2 TYR B 333      87.747  31.011  12.686  1.00 20.00  6
ATOM   2080  CE2 TYR B 333      86.831  30.923  11.624  1.00 20.00  6
ATOM   2081  CZ  TYR B 333      86.903  29.845  10.751  1.00 20.00  6
ATOM   2082  OH  TYR B 333      86.001  29.719   9.724  1.00 20.00  8
ATOM   2083  C   TYR B 333      89.958  28.800  16.252  1.00 20.00  6
ATOM   2084  O   TYR B 333      90.473  27.721  15.971  1.00 20.00  8
ATOM   2085  N   GLY B 334      90.242  29.469  17.369  1.00 20.00  7
ATOM   2086  CA  GLY B 334      91.193  28.921  18.327  1.00 20.00  6
ATOM   2087  C   GLY B 334      90.803  27.504  18.741  1.00 20.00  6
ATOM   2088  O   GLY B 334      91.577  26.564  18.558  1.00 20.00  8
ATOM   2089  N   PRO B 335      89.603  27.320  19.309  1.00 20.00  7
ATOM   2090  CD  PRO B 335      88.703  28.372  19.814  1.00 20.00  6
ATOM   2091  CA  PRO B 335      89.145  25.991  19.731  1.00 20.00  6
ATOM   2092  CB  PRO B 335      87.759  26.275  20.303  1.00 20.00  6
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	ATOM	2093	CG	PRO	B	335	87.925	27.644	20.883	1.00	20.00	6
	ATOM	2094	C	PRO	B	335	89.104	24.986	18.573	1.00	20.00	6
	ATOM	2095	O	PRO	B	335	89.406	23.808	18.756	1.00	20.00	8
	ATOM	2096	N	LEU	B	336	88.727	25.450	17.382	1.00	20.00	7
5	ATOM	2097	CA	LEU	B	336	88.666	24.567	16.219	1.00	20.00	6
	ATOM	2098	CB	LEU	B	336	88.031	25.292	15.023	1.00	20.00	6
	ATOM	2099	CG	LEU	B	336	88.051	24.581	13.663	1.00	20.00	6
	ATOM	2100	CD1	LEU	B	336	87.486	23.177	13.787	1.00	20.00	6
	ATOM	2101	CD2	LEU	B	336	87.239	25.399	12.653	1.00	20.00	6
10	ATOM	2102	C	LEU	B	336	90.060	24.068	15.839	1.00	20.00	6
	ATOM	2103	O	LEU	B	336	90.274	22.870	15.665	1.00	20.00	8
	ATOM	2104	N	LYS	B	337	91.011	24.986	15.717	1.00	20.00	7
	ATOM	2105	CA	LYS	B	337	92.370	24.597	15.360	1.00	20.00	6
	ATOM	2106	CB	LYS	B	337	93.198	25.848	15.046	1.00	20.00	6
15	ATOM	2107	CG	LYS	B	337	92.678	26.560	13.801	1.00	20.00	6
	ATOM	2108	CD	LYS	B	337	93.111	28.014	13.717	1.00	20.00	6
	ATOM	2109	CE	LYS	B	337	94.561	28.167	13.314	1.00	20.00	6
	ATOM	2110	NZ	LYS	B	337	94.882	29.611	13.122	1.00	20.00	7
	ATOM	2111	C	LYS	B	337	93.020	23.764	16.467	1.00	20.00	6
20	ATOM	2112	O	LYS	B	337	93.965	23.015	16.215	1.00	20.00	8
	ATOM	2113	N	ALA	B	338	92.495	23.866	17.684	1.00	20.00	7
	ATOM	2114	CA	ALA	B	338	93.056	23.105	18.799	1.00	20.00	6
	ATOM	2115	CB	ALA	B	338	92.873	23.877	20.105	1.00	20.00	6
	ATOM	2116	C	ALA	B	338	92.441	21.718	18.929	1.00	20.00	6
25	ATOM	2117	O	ALA	B	338	92.805	20.955	19.820	1.00	20.00	8
	ATOM	2118	N	HIS	B	339	91.513	21.375	18.043	1.00	20.00	7
	ATOM	2119	CA	HIS	B	339	90.886	20.061	18.129	1.00	20.00	6
	ATOM	2120	CB	HIS	B	339	89.786	19.919	17.074	1.00	20.00	6
	ATOM	2121	CG	HIS	B	339	88.999	18.654	17.199	1.00	20.00	6
30	ATOM	2122	CD2	HIS	B	339	87.797	18.406	17.774	1.00	20.00	6
	ATOM	2123	ND1	HIS	B	339	89.462	17.440	16.737	1.00	20.00	7
	ATOM	2124	CE1	HIS	B	339	88.578	16.498	17.021	1.00	20.00	6
	ATOM	2125	NE2	HIS	B	339	87.559	17.057	17.650	1.00	20.00	7
	ATOM	2126	C	HIS	B	339	91.928	18.952	17.970	1.00	20.00	6
35	ATOM	2127	O	HIS	B	339	92.863	19.077	17.186	1.00	20.00	8
	ATOM	2128	N	PRO	B	340	91.780	17.854	18.731	1.00	20.00	7
	ATOM	2129	CD	PRO	B	340	90.747	17.655	19.765	1.00	20.00	6
	ATOM	2130	CA	PRO	B	340	92.700	16.711	18.694	1.00	20.00	6
	ATOM	2131	CB	PRO	B	340	91.966	15.665	19.521	1.00	20.00	6
40	ATOM	2132	CG	PRO	B	340	91.310	16.505	20.579	1.00	20.00	6
	ATOM	2133	C	PRO	B	340	93.072	16.198	17.301	1.00	20.00	6
	ATOM	2134	O	PRO	B	340	94.193	15.748	17.080	1.00	20.00	8
	ATOM	2135	N	PHE	B	341	92.139	16.270	16.362	1.00	20.00	7
	ATOM	2136	CA	PHE	B	341	92.407	15.797	15.011	1.00	20.00	6
45	ATOM	2137	CB	PHE	B	341	91.152	15.943	14.142	1.00	20.00	6
	ATOM	2138	CG	PHE	B	341	91.317	15.424	12.738	1.00	20.00	6
	ATOM	2139	CD1	PHE	B	341	91.596	14.080	12.507	1.00	20.00	6
	ATOM	2140	CD2	PHE	B	341	91.182	16.277	11.647	1.00	20.00	6
	ATOM	2141	CE1	PHE	B	341	91.738	13.592	11.207	1.00	20.00	6
50	ATOM	2142	CE2	PHE	B	341	91.320	15.803	10.345	1.00	20.00	6
	ATOM	2143	CZ	PHE	B	341	91.599	14.457	10.123	1.00	20.00	6
	ATOM	2144	C	PHE	B	341	93.571	16.550	14.362	1.00	20.00	6
	ATOM	2145	O	PHE	B	341	94.268	16.002	13.514	1.00	20.00	8
	ATOM	2146	N	PHE	B	342	93.777	17.800	14.765	1.00	20.00	7
55	ATOM	2147	CA	PHE	B	342	94.842	18.630	14.202	1.00	20.00	6
	ATOM	2148	CB	PHE	B	342	94.336	20.058	13.975	1.00	20.00	6
	ATOM	2149	CG	PHE	B	342	93.124	20.152	13.096	1.00	20.00	6
	ATOM	2150	CD1	PHE	B	342	93.166	19.729	11.777	1.00	20.00	6
	ATOM	2151	CD2	PHE	B	342	91.954	20.734	13.575	1.00	20.00	6

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ATOM   2152  CE1 PHE B 342      92.058  19.888  10.936  1.00 20.00      6
ATOM   2153  CE2 PHE B 342      90.843  20.898  12.742  1.00 20.00      6
ATOM   2154  CZ  PHE B 342      90.898  20.475  11.423  1.00 20.00      6
ATOM   2155  C   PHE B 342      96.077  18.718  15.101  1.00 20.00      6
ATOM   2156  O   PHE B 342      96.932  19.584  14.902  1.00 20.00      8
ATOM   2157  N   GLU B 343      96.173  17.829  16.083  1.00 20.00      7
ATOM   2158  CA  GLU B 343      97.293  17.857  17.022  1.00 20.00      6
ATOM   2159  CB  GLU B 343      97.330  16.564  17.841  1.00 20.00      6
ATOM   2160  CG  GLU B 343      98.475  16.525  18.839  1.00 20.00      6
ATOM   2161  CD  GLU B 343      98.372  15.365  19.813  1.00 20.00      6
ATOM   2162  OE1 GLU B 343      98.290  14.201  19.359  1.00 20.00      8
ATOM   2163  OE2 GLU B 343      98.379  15.622  21.036  1.00 20.00      8
ATOM   2164  C   GLU B 343      98.683  18.113  16.430  1.00 20.00      6
ATOM   2165  O   GLU B 343      99.419  18.969  16.925  1.00 20.00      8
ATOM   2166  N   SER B 344      99.047  17.382  15.383  1.00 20.00      7
ATOM   2167  CA  SER B 344     100.370  17.549  14.781  1.00 20.00      6
ATOM   2168  CB  SER B 344     100.848  16.219  14.192  1.00 20.00      6
ATOM   2169  OG  SER B 344     100.072  15.856  13.065  1.00 20.00      8
ATOM   2170  C   SER B 344     100.467  18.629  13.702  1.00 20.00      6
ATOM   2171  O   SER B 344     101.485  18.732  13.025  1.00 20.00      8
ATOM   2172  N   VAL B 345      99.423  19.435  13.544  1.00 20.00      7
ATOM   2173  CA  VAL B 345      99.430  20.486  12.527  1.00 20.00      6
ATOM   2174  CB  VAL B 345      97.985  20.843  12.075  1.00 20.00      6
ATOM   2175  CG1 VAL B 345      98.015  22.042  11.120  1.00 20.00      6
ATOM   2176  CG2 VAL B 345      97.335  19.646  11.400  1.00 20.00      6
ATOM   2177  C   VAL B 345     100.096  21.785  12.980  1.00 20.00      6
ATOM   2178  O   VAL B 345      99.844  22.275  14.085  1.00 20.00      8
ATOM   2179  N   THR B 346     100.951  22.335  12.122  1.00 20.00      7
ATOM   2180  CA  THR B 346     101.602  23.610  12.397  1.00 20.00      6
ATOM   2181  CB  THR B 346     103.096  23.593  11.982  1.00 20.00      6
ATOM   2182  OG1 THR B 346     103.816  22.688  12.831  1.00 20.00      8
ATOM   2183  CG2 THR B 346     103.707  24.983  12.115  1.00 20.00      6
ATOM   2184  C   THR B 346     100.810  24.573  11.510  1.00 20.00      6
ATOM   2185  O   THR B 346     100.950  24.565  10.285  1.00 20.00      8
ATOM   2186  N   TRP B 347      99.966  25.385  12.138  1.00 20.00      7
ATOM   2187  CA  TRP B 347      99.089  26.306  11.425  1.00 20.00      6
ATOM   2188  CB  TRP B 347      97.941  26.727  12.344  1.00 20.00      6
ATOM   2189  CG  TRP B 347      97.088  25.594  12.818  1.00 20.00      6
ATOM   2190  CD2 TRP B 347      95.924  25.071  12.165  1.00 20.00      6
ATOM   2191  CE2 TRP B 347      95.436  24.008  12.963  1.00 20.00      6
ATOM   2192  CE3 TRP B 347      95.247  25.397  10.983  1.00 20.00      6
ATOM   2193  CD1 TRP B 347      97.259  24.848  13.953  1.00 20.00      6
ATOM   2194  NE1 TRP B 347      96.269  23.893  14.048  1.00 20.00      7
ATOM   2195  CZ2 TRP B 347      94.300  23.270  12.616  1.00 20.00      6
ATOM   2196  CZ3 TRP B 347      94.113  24.661  10.636  1.00 20.00      6
ATOM   2197  CH2 TRP B 347      93.654  23.610  11.452  1.00 20.00      6
ATOM   2198  C   TRP B 347      99.679  27.563  10.800  1.00 20.00      6
ATOM   2199  O   TRP B 347      99.101  28.114   9.867  1.00 20.00      8
ATOM   2200  N   ALA B 348     100.820  28.016  11.308  1.00 20.00      7
ATOM   2201  CA  ALA B 348     101.439  29.247  10.822  1.00 20.00      6
ATOM   2202  CB  ALA B 348     102.582  29.656  11.761  1.00 20.00      6
ATOM   2203  C   ALA B 348     101.933  29.277   9.381  1.00 20.00      6
ATOM   2204  O   ALA B 348     101.874  30.323   8.738  1.00 20.00      8
ATOM   2205  N   ASN B 349     102.411  28.152   8.860  1.00 20.00      7
ATOM   2206  CA  ASN B 349     102.940  28.153   7.500  1.00 20.00      6
ATOM   2207  CB  ASN B 349     104.466  28.205   7.569  1.00 20.00      6
ATOM   2208  CG  ASN B 349     105.058  26.929   8.138  1.00 20.00      6
ATOM   2209  OD1 ASN B 349     104.445  26.282   8.984  1.00 20.00      8
ATOM   2210  ND2 ASN B 349     106.251  26.563   7.678  1.00 20.00      7
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ATOM   2211  C   ASN B 349     102.522  26.966   6.634  1.00 20.00   6
ATOM   2212  O   ASN B 349     103.353  26.371   5.944  1.00 20.00   8
ATOM   2213  N   LEU B 350     101.242  26.628   6.643  1.00 20.00   7
ATOM   2214  CA  LEU B 350     100.776  25.500   5.846  1.00 20.00   6
ATOM   2215  CB  LEU B 350      99.257  25.355   5.973  1.00 20.00   6
ATOM   2216  CG  LEU B 350      98.734  24.848   7.316  1.00 20.00   6
ATOM   2217  CD1 LEU B 350      97.244  25.127   7.418  1.00 20.00   6
ATOM   2218  CD2 LEU B 350      99.030  23.357   7.444  1.00 20.00   6
ATOM   2219  C   LEU B 350     101.147  25.574   4.365  1.00 20.00   6
ATOM   2220  O   LEU B 350     101.557  24.575   3.775  1.00 20.00   8
ATOM   2221  N   HIS B 351     101.006  26.744   3.752  1.00 20.00   7
ATOM   2222  CA  HIS B 351     101.305  26.829   2.329  1.00 20.00   6
ATOM   2223  CB  HIS B 351     100.651  28.087   1.721  1.00 20.00   6
ATOM   2224  CG  HIS B 351     101.553  29.274   1.618  1.00 20.00   6
ATOM   2225  CD2 HIS B 351     102.001  30.143   2.556  1.00 20.00   6
ATOM   2226  ND1 HIS B 351     102.072  29.706   0.416  1.00 20.00   7
ATOM   2227  CE1 HIS B 351     102.798  30.792   0.618  1.00 20.00   6
ATOM   2228  NE2 HIS B 351     102.772  31.079   1.907  1.00 20.00   7
ATOM   2229  C   HIS B 351     102.797  26.731   1.999  1.00 20.00   6
ATOM   2230  O   HIS B 351     103.176  26.669   0.832  1.00 20.00   8
ATOM   2231  N   GLN B 352     103.634  26.685   3.033  1.00 20.00   7
ATOM   2232  CA  GLN B 352     105.081  26.554   2.851  1.00 20.00   6
ATOM   2233  CB  GLN B 352     105.841  27.458   3.819  1.00 20.00   6
ATOM   2234  CG  GLN B 352     106.395  28.705   3.166  1.00 20.00   6
ATOM   2235  CD  GLN B 352     105.930  29.966   3.854  1.00 20.00   6
ATOM   2236  OE1 GLN B 352     106.134  30.139   5.053  1.00 20.00   8
ATOM   2237  NE2 GLN B 352     105.299  30.854   3.096  1.00 20.00   7
ATOM   2238  C   GLN B 352     105.478  25.099   3.088  1.00 20.00   6
ATOM   2239  O   GLN B 352     106.632  24.715   2.895  1.00 20.00   8
ATOM   2240  N   GLN B 353     104.514  24.295   3.522  1.00 20.00   7
ATOM   2241  CA  GLN B 353     104.761  22.888   3.777  1.00 20.00   6
ATOM   2242  CB  GLN B 353     103.849  22.395   4.900  1.00 20.00   6
ATOM   2243  CG  GLN B 353     104.122  23.050   6.240  1.00 20.00   6
ATOM   2244  CD  GLN B 353     103.075  22.711   7.281  1.00 20.00   6
ATOM   2245  OE1 GLN B 353     102.627  21.571   7.377  1.00 20.00   8
ATOM   2246  NE2 GLN B 353     102.690  23.700   8.076  1.00 20.00   7
ATOM   2247  C   GLN B 353     104.507  22.079   2.510  1.00 20.00   6
ATOM   2248  O   GLN B 353     103.732  22.490   1.641  1.00 20.00   8
ATOM   2249  N   THR B 354     105.172  20.937   2.401  1.00 20.00   7
ATOM   2250  CA  THR B 354     104.998  20.071   1.244  1.00 20.00   6
ATOM   2251  CB  THR B 354     106.240  19.173   1.029  1.00 20.00   6
ATOM   2252  OG1 THR B 354     107.390  19.999   0.790  1.00 20.00   8
ATOM   2253  CG2 THR B 354     106.033  18.243  -0.166  1.00 20.00   6
ATOM   2254  C   THR B 354     103.777  19.197   1.501  1.00 20.00   6
ATOM   2255  O   THR B 354     103.745  18.426   2.454  1.00 20.00   8
ATOM   2256  N   PRO B 355     102.741  19.319   0.658  1.00 20.00   7
ATOM   2257  CD  PRO B 355     102.547  20.275  -0.444  1.00 20.00   6
ATOM   2258  CA  PRO B 355     101.540  18.505   0.859  1.00 20.00   6
ATOM   2259  CB  PRO B 355     100.616  18.967  -0.266  1.00 20.00   6
ATOM   2260  CG  PRO B 355     101.039  20.387  -0.490  1.00 20.00   6
ATOM   2261  C   PRO B 355     101.835  17.011   0.766  1.00 20.00   6
ATOM   2262  O   PRO B 355     102.631  16.577  -0.065  1.00 20.00   8
ATOM   2263  N   PRO B 356     101.198  16.204   1.625  1.00 20.00   7
ATOM   2264  CD  PRO B 356     100.128  16.522   2.587  1.00 20.00   6
ATOM   2265  CA  PRO B 356     101.438  14.761   1.573  1.00 20.00   6
ATOM   2266  CB  PRO B 356     100.593  14.235   2.729  1.00 20.00   6
ATOM   2267  CG  PRO B 356      99.429  15.188   2.737  1.00 20.00   6
ATOM   2268  C   PRO B 356     100.960  14.244   0.222  1.00 20.00   6
ATOM   2269  O   PRO B 356     100.005  14.779  -0.346  1.00 20.00   8
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ATOM   2270  N   ALA B 357     101.629  13.221  -0.300  1.00 20.00  7
ATOM   2271  CA  ALA B 357     101.247  12.660  -1.588  1.00 20.00  6
ATOM   2272  CB  ALA B 357     102.352  11.750  -2.118  1.00 20.00  6
ATOM   2273  C   ALA B 357      99.948  11.883  -1.427  1.00 20.00  6
ATOM   2274  O   ALA B 357      99.808  11.074  -0.506  1.00 20.00  8
ATOM   2275  N   LEU B 358      99.000  12.134  -2.323  1.00 20.00  7
ATOM   2276  CA  LEU B 358      97.709  11.460  -2.278  1.00 20.00  6
ATOM   2277  CB  LEU B 358      96.729  12.166  -3.217  1.00 20.00  6
ATOM   2278  CG  LEU B 358      96.368  13.582  -2.766  1.00 20.00  6
ATOM   2279  CD1 LEU B 358      95.513  14.262  -3.813  1.00 20.00  6
ATOM   2280  CD2 LEU B 358      95.636  13.516  -1.430  1.00 20.00  6
ATOM   2281  C   LEU B 358      97.813   9.976  -2.633  1.00 20.00  6
ATOM   2282  O   LEU B 358      97.918   9.614  -3.806  1.00 20.00  8
ATOM   2283  N   THR B 359      97.776   9.134  -1.600  1.00 20.00  7
ATOM   2284  CA  THR B 359      97.867   7.678  -1.735  1.00 20.00  6
ATOM   2285  CB  THR B 359      96.513   7.046  -2.149  1.00 20.00  6
ATOM   2286  OG1 THR B 359      96.111   7.555  -3.427  1.00 20.00  8
ATOM   2287  CG2 THR B 359      95.439   7.355  -1.112  1.00 20.00  6
ATOM   2288  C   THR B 359      98.933   7.238  -2.736  1.00 20.00  6
ATOM   2289  O   THR B 359      99.903   7.998  -2.945  1.00 20.00  8
ATOM   2290  OXT THR B 359      98.802   6.121  -3.280  1.00 20.00  8
TER
ATOM   2291  OH2 TIP S   1      42.566  19.118  34.302  1.00 15.09      S
ATOM   2292  OH2 TIP S   2      41.052  32.378  19.857  1.00 15.82      S
ATOM   2293  OH2 TIP S   3      37.014  33.030  17.747  1.00 16.95      S
ATOM   2294  OH2 TIP S   5      45.353  24.370  18.152  1.00 16.85      S
ATOM   2295  OH2 TIP S   6      31.896  13.930  33.235  1.00 20.42      S
ATOM   2296  OH2 TIP S   7      50.351  22.781  28.249  1.00 21.14      S
ATOM   2297  OH2 TIP S   8      45.246  -0.589  -0.734  1.00 17.74      S
ATOM   2298  OH2 TIP S  11      46.249  -0.348  -8.523  1.00 21.32      S
ATOM   2299  OH2 TIP S  14      45.756  11.148  29.680  1.00 21.94      S
ATOM   2300  OH2 TIP S  15      44.273  13.157  34.592  1.00 15.61      S
ATOM   2301  OH2 TIP S  17      53.598   3.722  -1.720  1.00 21.45      S
ATOM   2302  OH2 TIP S  18      46.049  13.087  31.565  1.00 20.35      S
ATOM   2303  OH2 TIP S  19      53.422  22.401  -3.280  1.00 23.26      S
ATOM   2304  OH2 TIP S  20      34.587   7.922   5.383  1.00 22.58      S
ATOM   2305  OH2 TIP S  21      45.053  27.379  19.376  1.00 29.60      S
ATOM   2306  OH2 TIP S  23      28.899  36.416  28.633  1.00 31.68      S
ATOM   2307  OH2 TIP S  24      35.531  11.645  -8.219  1.00 23.45      S
ATOM   2308  OH2 TIP S  25      47.364  28.787  19.612  1.00 23.03      S
ATOM   2309  OH2 TIP S  27      48.859  21.588  12.634  1.00 23.76      S
ATOM   2310  OH2 TIP S  29      48.805   8.920  23.626  1.00 22.23      S
ATOM   2311  OH2 TIP S  31      48.619   7.247  10.112  1.00 21.32      S
ATOM   2312  OH2 TIP S  34      44.824  28.720  15.621  1.00 25.27      S
ATOM   2313  OH2 TIP S  35      26.030  12.634  13.407  1.00 21.61      S
ATOM   2314  OH2 TIP S  36      50.462  19.810  40.066  1.00 25.45      S
ATOM   2315  OH2 TIP S  37      39.631  23.510  -0.239  1.00 30.88      S
ATOM   2316  OH2 TIP S  40      44.734  42.655  10.346  1.00 30.84      S
ATOM   2317  OH2 TIP S  41      54.653   3.902   1.503  1.00 27.14      S
ATOM   2318  OH2 TIP S  45      45.693  21.923  39.754  1.00 28.30      S
ATOM   2319  OH2 TIP S  47      47.820  16.413   7.805  1.00 25.73      S
ATOM   2320  OH2 TIP S  48      50.292  31.412  29.642  1.00 32.79      S
ATOM   2321  OH2 TIP S  49      26.056  16.646  34.827  1.00 29.80      S
ATOM   2322  OH2 TIP S  52      31.714  10.996  31.855  1.00 29.15      S
ATOM   2323  OH2 TIP S  53      46.108  23.843  -4.299  1.00 24.21      S
ATOM   2324  OH2 TIP S  54      37.645  11.206  34.448  1.00 28.56      S
ATOM   2325  OH2 TIP S  55      26.371  28.513  12.142  1.00 32.08      S
ATOM   2326  OH2 TIP S  58      33.564  19.700   3.483  1.00 28.28      S
ATOM   2327  OH2 TIP S  64      48.295  -0.632  14.280  1.00 32.13      S
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ATOM   2328  OH2 TIP S  65      40.064  26.036  34.324  1.00 24.17      S
ATOM   2329  OH2 TIP S  66      29.570   3.958  14.729  1.00 28.94      S
ATOM   2330  OH2 TIP S  72      60.085  11.604   6.814  1.00 38.35      S
ATOM   2331  OH2 TIP S  73      39.203  44.403  18.686  1.00 26.61      S
ATOM   2332  OH2 TIP S  76      47.312  12.366  27.366  1.00 28.51      S
ATOM   2333  OH2 TIP S  80      43.862  33.771  33.329  1.00 28.82      S
ATOM   2334  OH2 TIP S  81      57.890  13.106   2.128  1.00 40.62      S
ATOM   2335  OH2 TIP S  82      41.663  34.381  32.043  1.00 19.35      S
ATOM   2336  OH2 TIP S  85      50.974  40.331  19.200  1.00 21.14      S
ATOM   2337  OH2 TIP S  88      47.925  -0.832  -6.556  1.00 24.11      S
ATOM   2338  OH2 TIP S  90      27.231  28.336  33.481  1.00 27.64      S
ATOM   2339  OH2 TIP S  91      43.651  -7.101  -7.995  1.00 24.33      S
ATOM   2340  OH2 TIP S  92      49.325   4.387  19.370  1.00 28.02      S
ATOM   2341  OH2 TIP S  93      46.231  11.549  33.898  1.00 29.40      S
ATOM   2342  OH2 TIP S  94      63.889  24.831   1.168  1.00 26.53      S
ATOM   2343  OH2 TIP S  96      56.396   4.952  -6.749  1.00 28.00      S
ATOM   2344  OH2 TIP S  98      35.510  27.986  11.558  1.00 29.24      S
ATOM   2345  OH2 TIP S 100      49.942  24.366  30.265  1.00 31.61      S
ATOM   2346  OH2 TIP S 101      56.121   7.113  -8.298  1.00 31.57      S
ATOM   2347  OH2 TIP S 102      58.318  19.957  -8.378  1.00 26.95      S
ATOM   2348  OH2 TIP S 103      49.647  22.446  39.624  1.00 40.57      S
ATOM   2349  OH2 TIP S 104      45.359   7.052  13.052  1.00 26.27      S
ATOM   2350  OH2 TIP S 105      37.150  32.340  32.346  1.00 34.45      S
ATOM   2351  OH2 TIP S 107      43.465  40.457   8.240  1.00 40.48      S
ATOM   2352  OH2 TIP S 119      36.644   8.257  13.418  1.00 30.70      S
ATOM   2353  OH2 TIP S 123      41.912  -8.974  -8.264  1.00 26.08      S
ATOM   2354  OH2 TIP S 124      62.424  15.800  -7.411  1.00 24.08      S
ATOM   2355  OH2 TIP S 126      37.266  18.656  -9.097  1.00 28.99      S
ATOM   2356  OH2 TIP S 127      43.129  26.845  14.606  1.00 25.19      S
ATOM   2357  OH2 TIP S 128      36.339  32.639  29.802  1.00 29.25      S
ATOM   2358  OH2 TIP S 130      54.051  14.561  26.498  1.00 33.93      S
ATOM   2359  OH2 TIP S 131      41.805  -4.242   5.492  1.00 33.72      S
ATOM   2360  OH2 TIP S 133      38.873  25.163  36.697  1.00 30.69      S
ATOM   2361  OH2 TIP S 134      28.777   8.553  25.307  1.00 31.43      S
ATOM   2362  OH2 TIP S 135      53.672  10.546 -12.803  1.00 33.45      S
ATOM   2363  OH2 TIP S 136      59.892  15.434  11.467  1.00 31.39      S
ATOM   2364  OH2 TIP S 137      31.040  12.361  35.470  1.00 34.07      S
ATOM   2365  OH2 TIP S 139      33.489  14.292  -0.598  1.00 40.68      S
ATOM   2366  OH2 TIP S 140      46.918   8.748  11.662  1.00 29.23      S
ATOM   2367  OH2 TIP S 141      46.297  -7.287  -9.196  1.00 42.20      S
ATOM   2368  OH2 TIP S 142      58.193   6.715  -4.685  1.00 35.48      S
ATOM   2369  OH2 TIP S 143      44.598   4.435  12.503  1.00 27.68      S
ATOM   2370  OH2 TIP S 144      27.003   5.999  12.450  1.00 36.30      S
ATOM   2371  OH2 TIP S 145      43.676  32.852  35.735  1.00 35.70      S
ATOM   2372  OH2 TIP S 146      35.783  18.628  36.452  1.00 34.62      S
ATOM   2373  OH2 TIP S 147      25.402   4.058  20.638  1.00 45.03      S
ATOM   2374  OH2 TIP S 148      45.839  35.853  33.724  1.00 35.47      S
ATOM   2375  OH2 TIP S 149      22.176  18.976  16.752  1.00 31.87      S
ATOM   2376  OH2 TIP S 150      43.986  33.179  10.162  1.00 37.70      S
ATOM   2377  OH2 TIP S 151      50.653  20.347  42.428  1.00 35.80      S
ATOM   2378  OH2 TIP S 152      47.843  24.314   9.506  1.00 31.05      S
ATOM   2379  OH2 TIP S 153      44.693   5.273 -14.175  1.00 29.90      S
ATOM   2380  OH2 TIP S 155      26.560  36.851  31.684  1.00 49.29      S
ATOM   2381  OH2 TIP S 156      46.867   8.019 -12.951  1.00 29.21      S
ATOM   2382  OH2 TIP S 157      30.432  28.741  12.438  1.00 37.76      S
ATOM   2383  OH2 TIP S 158      41.004  20.553   6.423  1.00 39.53      S
ATOM   2384  OH2 TIP S 159      49.258  20.069  29.294  1.00 33.97      S
ATOM   2385  OH2 TIP S 160      48.082  28.459  16.489  1.00 33.10      S
ATOM   2386  OH2 TIP S 161      47.448  18.625  27.683  1.00 34.87      S
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ATOM   2387  OH2 TIP S 162      19.687  20.632  23.411  1.00 35.01      S
ATOM   2388  OH2 TIP S 163      32.402  -1.266  22.443  1.00 37.26      S
ATOM   2389  OH2 TIP S 164      39.475  33.468  33.237  1.00 35.34      S
ATOM   2390  OH2 TIP S 165      44.277  18.950   5.162  1.00 45.14      S
ATOM   2391  OH2 TIP S 166      34.797  30.523  10.736  1.00 47.55      S
ATOM   2392  OH2 TIP S 167      46.541   3.526 -14.949  1.00 26.54      S
ATOM   2393  OH2 TIP S 168      36.333  16.371   1.539  1.00 38.68      S
ATOM   2394  OH2 TIP S 169      46.761  38.936  27.403  1.00 34.66      S
ATOM   2395  OH2 TIP S 170      24.163  13.264  11.375  1.00 41.23      S
ATOM   2396  OH2 TIP S 171      48.459  15.018  31.951  1.00 38.11      S
ATOM   2397  OH2 TIP S 172      34.261  23.193  40.004  1.00 48.96      S
ATOM   2398  OH2 TIP S 173      45.924  -0.026  13.224  1.00 39.55      S
ATOM   2399  OH2 TIP S 175      41.384  37.389  32.543  1.00 40.74      S
ATOM   2400  OH2 TIP S 177      49.394  35.312  27.150  1.00 44.33      S
ATOM   2401  OH2 TIP S 178      29.066  29.942  34.359  1.00 41.46      S
ATOM   2402  OH2 TIP S 180      49.354  19.467   7.273  1.00 34.56      S
ATOM   2403  OH2 TIP S 181      25.298  17.029  31.863  1.00 47.74      S
ATOM   2404  OH2 TIP S 182      37.071  25.027   4.669  1.00 43.87      S
ATOM   2405  OH2 TIP S 183      22.581   7.487  18.691  1.00 41.75      S
ATOM   2406  OH2 TIP S 184      32.269   7.011  -1.891  1.00 48.84      S
ATOM   2407  OH2 TIP S 185      48.234   0.494   6.833  1.00 48.16      S
ATOM   2408  OH2 TIP S 187      20.008  14.658  19.211  1.00 45.27      S
ATOM   2409  OH2 TIP S 188      49.341  22.698  42.272  1.00 42.20      S
ATOM   2410  OH2 TIP S 190      61.292  18.260  -8.097  1.00 45.21      S
ATOM   2411  OH2 TIP S 191      28.152  10.606   2.819  1.00 40.38      S
ATOM   2412  OH2 TIP S 192      25.626  12.619  23.191  1.00 34.27      S
ATOM   2413  OH2 TIP S 193      59.876  11.603   1.216  1.00 46.54      S
ATOM   2414  OH2 TIP S 194      57.592  21.183 -10.646  1.00 45.82      S
ATOM   2415  OH2 TIP S 195      31.509  36.649  21.499  1.00 38.73      S
ATOM   2416  OH2 TIP S 197      50.270  -1.543  -6.136  1.00 42.66      S
ATOM   2417  OH2 TIP S 198      24.467   8.729  13.088  1.00 42.78      S
ATOM   2418  OH2 TIP S 199      38.098   8.699  25.759  1.00 32.80      S
ATOM   2419  OH2 TIP S 200      57.831  11.358 -13.255  1.00 45.31      S
ATOM   2420  OH2 TIP S 201      23.888  22.328  30.524  1.00 37.12      S
ATOM   2421  OH2 TIP S 202      47.691  26.068  37.666  1.00 37.92      S
ATOM   2422  OH2 TIP S 203      38.653   7.070  29.307  1.00 50.54      S
ATOM   2423  OH2 TIP S 206      44.424  27.583   2.092  1.00 53.50      S
ATOM   2424  OH2 TIP S 212      22.258   2.296  17.948  1.00 47.38      S
ATOM   2425  OH2 TIP S 214      19.843  17.943  23.303  1.00 30.36      S
ATOM   2426  OH2 TIP S 216      27.647  11.344  24.681  1.00 31.32      S
ATOM   2427  OH2 TIP S 217      37.953   7.817  -9.284  1.00 45.97      S
ATOM   2428  OH2 TIP S 218      33.845  34.040  12.124  1.00 38.11      S
ATOM   2429  OH2 TIP S 219      58.484  15.269  13.717  1.00 38.26      S
ATOM   2430  OH2 TIP S 220      48.526  40.920  26.583  1.00 35.23      S
ATOM   2431  OH2 TIP S 222      52.094  21.184  38.122  1.00 29.86      S
ATOM   2432  OH2 TIP S 223      36.889   5.881   3.281  1.00 37.63      S
ATOM   2433  OH2 TIP S 224      47.642  -1.401 -10.684  1.00 34.89      S
ATOM   2434  OH2 TIP S 226      47.284   2.916  19.133  1.00 34.10      S
ATOM   2435  OH2 TIP S 227      42.468   4.463 -15.039  1.00 37.98      S
ATOM   2436  OH2 TIP S 228      19.169  22.832  21.831  1.00 41.57      S
ATOM   2437  OH2 TIP S 231      57.592  12.689  14.880  1.00 50.22      S
ATOM   2438  OH2 TIP S 232      27.102   9.176   5.655  1.00 40.57      S
ATOM   2439  OH2 TIP S 233      58.618   9.072 -11.925  1.00 50.71      S
ATOM   2440  OH2 TIP S 234      22.822  25.342  19.945  1.00 34.93      S
ATOM   2441  OH2 TIP S 236      24.831  32.218  28.901  1.00 37.69      S
ATOM   2442  OH2 TIP S 237      20.045  10.774  16.992  1.00 39.57      S
ATOM   2443  OH2 TIP S 238      58.019  19.850  15.679  1.00 41.42      S
ATOM   2444  OH2 TIP S 239      19.490  20.949  26.114  1.00 34.55      S
ATOM   2445  OH2 TIP S 240      61.187  26.377   7.346  1.00 39.68      S
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ATOM   2446  OH2 TIP S 241      33.680  38.342  19.389  1.00 48.93      S
ATOM   2447  OH2 TIP S 242      51.539  31.612  10.881  1.00 55.65      S
ATOM   2448  OH2 TIP S 244      25.872  14.431  30.404  1.00 46.69      S
ATOM   2449  OH2 TIP S 248      37.332   5.849   9.544  1.00 43.81      S
ATOM   2450  OH2 TIP S 250      39.087  -1.293  -9.655  1.00 42.96      S
ATOM   2451  OH2 TIP S 258      23.938  30.000  30.010  1.00 38.89      S
ATOM   2452  OH2 TIP S 259      24.949  29.749  32.578  1.00 40.17      S
ATOM   2453  OH2 TIP S 260      32.111  17.986   1.918  1.00 48.36      S
ATOM   2454  OH2 TIP S 266      21.404  12.876  25.603  1.00 57.17      S
ATOM   2455  OH2 TIP S 269      35.425  36.767  12.550  1.00 30.70      S
ATOM   2456  OH2 TIP S 270      52.438  25.529  30.131  1.00 44.85      S
ATOM   2457  OH2 TIP S 271      53.299  20.156  36.003  1.00 37.15      S
ATOM   2458  OH2 TIP S 272      50.914   6.919  23.723  1.00 43.29      S
ATOM   2459  OH2 TIP S 274      31.578  30.795  11.014  1.00 50.15      S
ATOM   2460  OH2 TIP S 275      26.341   7.243  22.447  1.00 39.40      S
ATOM   2461  OH2 TIP S 276      60.392  18.195  10.235  1.00 37.91      S
ATOM   2462  OH2 TIP S 277      47.355  -9.081 -10.821  1.00 48.18      S
ATOM   2463  OH2 TIP S 279      41.304   6.175 -16.647  1.00 38.12      S
ATOM   2464  OH2 TIP S 282      33.299  21.620  37.881  1.00 46.29      S
ATOM   2465  OH2 TIP S 283      56.469  26.112  -8.575  1.00 43.71      S
ATOM   2466  OH2 TIP S 287      48.382  26.573   7.246  1.00 41.43      S
ATOM   2467  OH2 TIP S 288      56.240   7.245 -11.331  1.00 41.79      S
ATOM   2468  OH2 TIP S 290      49.060  14.978  28.166  1.00 37.03      S
ATOM   2469  OH2 TIP S 291      37.095  44.270  26.442  1.00 45.08      S
ATOM   2470  OH2 TIP S 292      47.814  -0.384 -13.299  1.00 48.60      S
ATOM   2471  OH2 TIP S 297      58.081   2.784  -7.841  1.00 41.89      S
ATOM   2472  OH2 TIP S 298      36.447  45.321  18.644  1.00 54.91      S
ATOM   2473  OH2 TIP S 299      49.029  23.328   1.767  1.00 30.55      S
ATOM   2474  OH2 TIP S 301      24.375  13.771   8.634  1.00 48.47      S
ATOM   2475  OH2 TIP S 303      47.904  36.798  28.653  1.00 35.76      S
ATOM   2476  OH2 TIP S 305      51.156  40.821  27.172  1.00 43.59      S
ATOM   2477  OH2 TIP S 306      32.943  28.917  35.227  1.00 42.60      S
ATOM   2478  OH2 TIP S 307      58.462  28.373   6.251  1.00 46.15      S
ATOM   2479  OH2 TIP S 308      41.964  30.940  36.712  1.00 48.26      S
ATOM   2480  OH2 TIP S 313      51.176  -1.922  -3.336  1.00 50.61      S
ATOM   2481  OH2 TIP S1001      21.319  36.868  23.805  1.00 36.97      S
ATOM   2482  OH2 TIP S1002      48.880  32.620  27.617  1.00 44.40      S
ATOM   2483  OH2 TIP S1003      61.880  19.473  11.767  1.00 45.49      S
ATOM   2484  OH2 TIP S1004      52.770  21.424  26.815  1.00 24.43      S
ATOM   2485  OH2 TIP S1005      35.373  29.094  36.197  1.00 35.97      S
ATOM   2486  OH2 TIP S1006      40.815  -6.636   4.389  1.00 43.15      S
ATOM   2487  OH2 TIP S1007      44.953   1.286  11.272  1.00 49.45      S
ATOM   2488  OH2 TIP S1010      21.004  16.168  27.009  1.00 48.51      S
ATOM   2489  OH2 TIP S1011      47.094  41.786   9.243  1.00 50.10      S
ATOM   2490  OH2 TIP S1012      32.479   2.978  14.158  1.00 49.47      S
ATOM   2491  O12 GLC G   1      48.557  11.372 -12.279  1.00 40.72      G
ATOM   2492  C11 GLC G   1      48.836  12.133 -11.097  1.00 38.05      G
ATOM   2493  C13 GLC G   1      49.266  13.554 -11.476  1.00 38.09      G
ATOM   2494  O14 GLC G   1      49.559  14.299 -10.292  1.00 33.99      G
ATOM   2495  C15 GLC G   1      48.150  14.257 -12.257  1.00 37.32      G
ATOM   2496  O16 GLC G   1      48.574  15.582 -12.604  1.00 36.74      G
ATOM   2497  O12 GLC G   2      40.114  -6.634  -6.562  1.00 33.52      G
ATOM   2498  C11 GLC G   2      38.967  -6.592  -7.404  1.00 31.05      G
ATOM   2499  C13 GLC G   2      37.712  -6.417  -6.552  1.00 31.56      G
ATOM   2500  O14 GLC G   2      36.554  -6.406  -7.389  1.00 30.70      G
ATOM   2501  C15 GLC G   2      37.792  -5.109  -5.761  1.00 30.03      G
ATOM   2502  O16 GLC G   2      36.609  -4.961  -4.975  1.00 29.66      G
ATOM   2503  O12 GLC G   3      44.030   8.243 -13.470  1.00 37.90      G
ATOM   2504  C11 GLC G   3      43.950   9.648 -13.690  1.00 38.47      G
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	ATOM	2505	C13	GLC	G	3	42.747	9.974	-14.579	1.00 39.52	G
	ATOM	2506	O14	GLC	G	3	41.551	9.526	-13.942	1.00 39.39	G
	ATOM	2507	C15	GLC	G	3	42.878	9.280	-15.934	1.00 41.43	G
	ATOM	2508	O16	GLC	G	3	41.736	9.613	-16.731	1.00 40.78	G
5	ATOM	2509	O12	GLC	G	5	40.556	1.005	2.289	1.00 45.25	G
	ATOM	2510	C11	GLC	G	5	40.966	2.332	1.960	1.00 40.56	G
	ATOM	2511	C13	GLC	G	5	40.187	3.327	2.814	1.00 40.36	G
	ATOM	2512	O14	GLC	G	5	38.791	3.169	2.572	1.00 40.71	G
	ATOM	2513	C15	GLC	G	5	40.619	4.751	2.464	1.00 40.04	G
10	ATOM	2514	O16	GLC	G	5	39.885	5.681	3.256	1.00 36.89	G
	ATOM	2515	O12	GLC	G	6	36.951	22.702	40.046	1.00 63.04	G
	ATOM	2516	C11	GLC	G	6	37.592	21.583	39.422	1.00 62.46	G
	ATOM	2517	C13	GLC	G	6	38.104	21.978	38.030	1.00 61.14	G
	ATOM	2518	O14	GLC	G	6	39.034	23.054	38.168	1.00 61.72	G
15	ATOM	2519	C15	GLC	G	6	36.948	22.429	37.126	1.00 60.51	G
	ATOM	2520	O16	GLC	G	6	35.992	21.372	36.960	1.00 58.61	G
	ATOM	2521	O12	GLC	G	7	37.316	0.281	14.299	1.00 73.45	G
	ATOM	2522	C11	GLC	G	7	37.655	-0.758	15.222	1.00 72.78	G
	ATOM	2523	C13	GLC	G	7	36.592	-1.856	15.157	1.00 72.98	G
20	ATOM	2524	O14	GLC	G	7	35.320	-1.299	15.498	1.00 73.88	G
	ATOM	2525	C15	GLC	G	7	36.924	-2.989	16.134	1.00 73.66	G
	ATOM	2526	O16	GLC	G	7	36.972	-2.493	17.478	1.00 75.38	G
	ATOM	2527	O12	GLC	G	8	51.921	21.898	5.908	1.00 62.51	G
	ATOM	2528	C11	GLC	G	8	52.447	20.871	5.063	1.00 63.42	G
25	ATOM	2529	C13	GLC	G	8	51.476	20.597	3.908	1.00 64.28	G
	ATOM	2530	O14	GLC	G	8	51.297	21.794	3.150	1.00 66.28	G
	ATOM	2531	C15	GLC	G	8	50.121	20.137	4.448	1.00 64.49	G
	ATOM	2532	O16	GLC	G	8	49.233	19.886	3.357	1.00 64.01	G
	ATOM	2533	O12	GLC	G	10	36.044	37.499	29.523	1.00 56.89	G
30	ATOM	2534	C11	GLC	G	10	35.164	36.645	30.259	1.00 56.97	G
	ATOM	2535	C13	GLC	G	10	33.849	36.489	29.494	1.00 56.11	G
	ATOM	2536	O14	GLC	G	10	33.248	37.772	29.308	1.00 56.44	G
	ATOM	2537	C15	GLC	G	10	32.900	35.580	30.277	1.00 55.84	G
	ATOM	2538	O16	GLC	G	10	31.674	35.442	29.557	1.00 55.39	G
35	ATOM	2539	O3G	ATP	N	1	46.280	25.658	5.170	1.00 51.49	N
	ATOM	2540	PG	ATP	N	1	46.464	25.053	3.691	1.00 52.22	N
	ATOM	2541	O1G	ATP	N	1	47.406	23.911	3.763	1.00 51.41	N
	ATOM	2542	O2G	ATP	N	1	46.794	26.182	2.784	1.00 52.07	N
	ATOM	2543	O3B	ATP	N	1	44.976	24.513	3.344	1.00 51.01	N
40	ATOM	2544	PB	ATP	N	1	44.560	22.969	3.605	1.00 50.20	N
	ATOM	2545	O1B	ATP	N	1	43.083	22.898	3.669	1.00 49.41	N
	ATOM	2546	O2B	ATP	N	1	45.345	22.474	4.766	1.00 50.34	N
	ATOM	2547	O3A	ATP	N	1	45.070	22.231	2.255	1.00 47.77	N
	ATOM	2548	PA	ATP	N	1	45.075	20.613	2.121	1.00 42.84	N
45	ATOM	2549	O1A	ATP	N	1	45.547	20.291	0.754	1.00 43.81	N
	ATOM	2550	O2A	ATP	N	1	45.807	20.035	3.270	1.00 45.03	N
	ATOM	2551	O5*	ATP	N	1	43.516	20.223	2.245	1.00 41.73	N
	ATOM	2552	C5*	ATP	N	1	42.528	20.925	1.489	1.00 37.57	N
	ATOM	2553	C4*	ATP	N	1	41.127	20.379	1.776	1.00 39.45	N
50	ATOM	2554	O4*	ATP	N	1	40.907	19.024	1.279	1.00 37.72	N
	ATOM	2555	C3*	ATP	N	1	40.777	20.321	3.251	1.00 38.48	N
	ATOM	2556	O3*	ATP	N	1	40.360	21.615	3.697	1.00 40.42	N
	ATOM	2557	C2*	ATP	N	1	39.608	19.374	3.270	1.00 37.58	N
	ATOM	2558	O2*	ATP	N	1	38.410	20.076	2.924	1.00 35.98	N
55	ATOM	2559	C1*	ATP	N	1	39.939	18.346	2.173	1.00 35.55	N
	ATOM	2560	N9	ATP	N	1	40.628	17.156	2.747	1.00 31.76	N
	ATOM	2561	C8	ATP	N	1	41.864	17.126	3.274	1.00 30.49	N
	ATOM	2562	N7	ATP	N	1	42.143	15.877	3.667	1.00 29.75	N
	ATOM	2563	C5	ATP	N	1	41.088	15.118	3.390	1.00 27.49	N

```
ATOM   2564  C4  ATP N   1      40.125  15.925   2.810  1.00 30.02      N
ATOM   2565  N3  ATP N   1      38.937  15.389   2.431  1.00 27.11      N
ATOM   2566  C2  ATP N   1      38.679  14.085   2.615  1.00 25.62      N
ATOM   2567  N1  ATP N   1      39.597  13.283   3.175  1.00 21.76      N
ATOM   2568  C6  ATP N   1      40.800  13.768   3.571  1.00 23.90      N
ATOM   2569  N6  ATP N   1      41.698  12.964   4.127  1.00 21.94      N
ATOM   2570  S   SO4 I   1      58.680   8.493  -0.639  1.00 56.05      I
ATOM   2571  O1  SO4 I   1      57.956   7.875   0.483  1.00 58.83      I
ATOM   2572  O2  SO4 I   1      57.886   9.607  -1.188  1.00 57.04      I
ATOM   2573  O3  SO4 I   1      58.906   7.478  -1.683  1.00 57.47      I
ATOM   2574  O4  SO4 I   1      59.976   9.008  -0.156  1.00 57.51      I
ATOM   2575  S   SO4 I   2      39.339   4.855   7.057  1.00 84.24      I
ATOM   2576  O1  SO4 I   2      39.390   6.175   7.711  1.00 85.02      I
ATOM   2577  O2  SO4 I   2      40.101   4.897   5.797  1.00 84.75      I
ATOM   2578  O3  SO4 I   2      37.936   4.506   6.766  1.00 84.94      I
ATOM   2579  O4  SO4 I   2      39.931   3.842   7.954  1.00 84.44      I
ATOM   2580  S   SO4 I   3      38.987  -2.256   3.310  1.00 58.58      I
ATOM   2581  O1  SO4 I   3      37.734  -1.675   3.827  1.00 59.11      I
ATOM   2582  O2  SO4 I   3      39.460  -1.454   2.172  1.00 59.91      I
ATOM   2583  O3  SO4 I   3      38.743  -3.640   2.866  1.00 60.97      I
ATOM   2584  O4  SO4 I   3      40.014  -2.260   4.369  1.00 59.58      I
ATOM   2585  S   SO4 I   4      34.397   5.289  30.981  1.00 64.34      I
ATOM   2586  O1  SO4 I   4      33.627   6.528  30.742  1.00 60.43      I
ATOM   2587  O2  SO4 I   4      34.337   4.427  29.782  1.00 60.11      I
ATOM   2588  O3  SO4 I   4      33.816   4.572  32.133  1.00 64.39      I
ATOM   2589  O4  SO4 I   4      35.806   5.626  31.277  1.00 63.55      I
ATOM   2590  S   SO4 I   5      55.074  -6.984  -3.711  1.00 75.40      I
ATOM   2591  O1  SO4 I   5      54.657  -7.518  -2.399  1.00 74.66      I
ATOM   2592  O2  SO4 I   5      54.209  -5.845  -4.065  1.00 74.96      I
ATOM   2593  O3  SO4 I   5      54.950  -8.034  -4.742  1.00 74.22      I
ATOM   2594  O4  SO4 I   5      56.477  -6.532  -3.633  1.00 75.15      I
ATOM   2595  O2  PO4 P 100      57.362  24.998  13.149  1.00 66.76      P
ATOM   2596  O3  PO4 P 100      59.399  26.166  13.761  1.00 66.89      P
ATOM   2597  O4  PO4 P 100      57.761  25.606  15.462  1.00 67.43      P
ATOM   2598  O1  PO4 P 100      57.264  27.325  13.818  1.00 65.91      P
ATOM   2599  P   PO4 P 100      57.947  26.025  14.048  1.00 66.69      P
END
```

Example 5: PDK1 fragments

We produced constructs for expression of different forms of PDK1 in bacteria. The constructs were either in TRC vectors, pET-15b vector and pGEX expression vector to enable the expression of GST fused N-terminally to PDK1. PDK1 expressed from pGEX 51-556 (ie residues 51 to 556 of PDK1) was found to be highly degraded.

PDK1 protein was also expressed with N-terminal His tags from vector TRC comprising PDK1 sequences 51-556, 51-404 and 1-360, or pET15b 51-404 and tested for expression levels and activity. The expression was generally low, around 0.2 mg/L culture. The specific activity was lower than the His-tagged 51-556 protein purified from baculovirus cells. In the case of PDK1 51-404 expressed from pET-15b construct the level of expression turned out to be very variable. This was probably due to instability of the plasmid since we produced evidence that after a growth of 0.2 units of absorbance, (as measured in a spectrophotometer at 600 nm wavelength) the cells growing faster in the culture were actually not harbouring the plasmid with ampiciline resistance. The instability of the plasmid can be due to toxicity produced by basal expression of PDK1. Although production in bacteria was the theoretical best expression system to avoid heterogeneity due to the different extent of phosphorylation of the different phosphorylation sites in hPDK1, it was found that the protein was either degraded, expressed to low levels, had 5 times less specific activity, or was possibly toxic.

The His-tagged purified PDK1 51-556 protein obtained from baculovirus expression system was homogeneous as depicted by the appearance of one band after by SDS-PAGE analysis of a sample.

Nevertheless, the analysis after isoelectric focussing revealed a large smear of protein covering several units of pH. This analysis suggested that the protein was not homogeneous in terms of its isoelectric point, possibly due to the number of phosphorylation sites which were not homogeneously phosphorylated. This protein did not crystallise.

We purified to homogeneity a truncated His-Myc tagged PDK1 (51-404) which lacks the N-terminal 50 residues and the C-terminal 152 residues which include the PH domain. This protein, produced by a baculovirus expression system, had similar characteristics to the full length wild type PDK1 in terms of its activity towards the peptide substrate T308tide, its activation by the peptide PIFtide, and the binding to PIFtide (as analysed by BiaCore). The purified protein was screened for crystallisation conditions using Hampton Research kits (144 different conditions). Crystallisation conditions were screened with two concentrations of PDK1, in the presence or absence of PIFtide, Staurosporine, at 20^{o}C and in the presence of PIFtide at 4^{o}C. No protein crystals were observed after 6 months, suggesting that this construct was not suitable for forming crystals although all other characteristics were similar to wild type protein.

The His-Myc PDK1 51-404 purified protein was also subjected to protease treatments in order to obtain a protease-insensitive molecule for increasing the chances of obtaining a shorter, stable variant of PDK1. Different protease treatments were tested. Treatment with Glu-C produced a polypeptide of approximately 38 KDa which was stable. This PDK1 protein was active and lacked the His-tag and part of the Myc-tag, and possibly part of the C-terminal residues. This protein was also set up for crystallography screenings. Some crystals were obtained using this preparation after 4 months, but they were not followed up.

A protein kinase corresponding to residues PDk1 51-387 was also produced, in an identical vector to that used to produce the protein PDK1 51-359. Interestingly, this protein was similar to wild type and PDK1 51-404, but had extreme problems for concentration using conventional methods. The protein could not be concentrated further than 2.5 mg/ml, and no crystals were obtained using this construct.

The PDK1 protein that finally crystallised is lacking the first 50 aminoacids and was constructed to end at position 359. This protein was stable in the absence of the PH domain and aminoacids that in hPDK1 link the catalytic domain with the PH domain. The construct PDK1 51-359 was also short enough that no other described phosphorylation sites besides activation loop phosphorylation site 241 were present.

CLAIMS

1. A method for selecting or designing a compound for modulating the activity of phosphoinositide dependent protein kinase 1 (PDK1), the method comprising the step of using molecular modelling means to select or design a compound that is predicted to interact with the protein kinase catalytic domain of PDK1, wherein a three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 is compared with a three-dimensional structure of a compound, and a compound that is predicted to interact with the said protein kinase catalytic domain is selected, wherein the three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 is a three-dimensional structure (or part thereof) determined for a polypeptide consisting of residues equivalent to residues 51 to 359 of full length human PDK1, or a fragment or fusion thereof.

2. The method of claim 1 wherein the three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 structure is a three-dimensional structure (or part thereof) determined for a polypeptide consisting of residues 51 to 359 of full length human PDK1 or a fusion thereof.

3. The method of claim 2 wherein the three-dimensional structure (or part thereof) is determined for a polypeptide consisting of residues 51 to 359 of full length human PDK1 and the amino acid sequence Gly-Pro preceding the methionine corresponding to Met51 of human PDK1.

4. The method of claim 1 wherein the three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 structure is a three-dimensional structure (or part thereof) determined for a polypeptide

consisting of residues 71 to 359 of full length human PDK1 or a fusion thereof.

5. The method of any one of the preceding claims wherein the three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 structure is obtainable by X-ray analysis of a crystal obtainable using a mother liquor solution comprising ammonium sulphate.

6. The method of claim 5 wherein the mother liquor solution is of pH 7 to 9.

7. The method of claim 6 wherein the mother liquor solution is of pH 8.5.

8. The method of any one of claims 5 to 7 wherein the mother liquor solution comprises ATP.

9. The method of any one of claims 1 to 3, 5 to 8 wherein the three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 structure is that represented by the structure co-ordinates shown in Examples 2, 3 or 4, or a structure modelled on such structure co-ordinates.

10. The method of any one of the preceding claims wherein the molecule is predicted to bind to a region of the structure termed the "PIF binding pocket" (formed by residues including residues Lys115, Ile118, Ile119 on the αB helix, Val124, Val127 on the αC helix and Leu 155 on β-sheet 5 of full length human PDK1, or equivalent residues), the "phosphate binding pocket" (formed by residues including residues Lys76, Arg 131, Thr 148 and Gln150 of full length human PDK1, or equivalent residues) and/or the

α C helix (residues equivalent to 123-136 of full length human PDK1), or interacting regions.

11. The method of any of the preceding claims wherein the compound is for modulating the protein kinase activity of PDK1 towards PKB or other PH-domain-comprising/phosphoinositide-binding substrate of PDK1.

12. The method of any one of claims 1 to 10 wherein the compound is for modulating the protein kinase activity of PDK1 towards SGK, S6K or other substrate of PDK1 whose phosphorylation by PDK1 is promoted by phosphorylation of the substrate on the Ser/Thr of the "hydrophobic motif" FXXFS/TY.

13. A method for selecting or designing a compound for modulating the activity of a hydrophobic pocket (PIF binding pocket)-containing protein kinase having a hydrophobic pocket in the position equivalent to the hydrophobic pocket of human PDK1 that is defined by residues including Lys115, Ile118, Ile119, Val124, Val127 and/or Leu155 of full-length human PDK1 and further having a phosphate binding pocket in the position equivalent to the phosphate binding pocket of human PDK1 that is defined by residues including Lys76, Arg131, Thr148 and/or Gln150, the method comprising the step of using molecular modelling means to select or design a compound that is predicted to interact with the said hydrophobic pocket-containing protein kinase, wherein a three-dimensional structure of a compound is compared with a three-dimensional structure of the said phosphate binding pocket and optionally also the hydrophobic pocket and/or αC helix or region interacting therewith, and a compound that is predicted to interact with the said phosphate binding pocket and optionally

also the hydrophobic pocket and/or αC helix or region interacting therewith, is selected.

14. The method of claim 13 wherein the protein kinase is an isoform of Serum and Glucocorticoid stimulated protein kinase (SGK), Protein Kinase B (PKB), p70 S6 kinase, p90 RSK, PKC isoforms (for example PKCα, PKCδ, PKCζ), PRK1, PRK2, MSK1 or MSK2.

15. The method of claim 13 or 14 wherein the three-dimensional structure of the said phosphate binding pocket and optionally also the hydrophobic pocket and/or αC helix or region interacting therewith is a structure modelled on the basis of a three-dimensional structure as defined in any one of claims 1 to 9.

16. The method of any one of the preceding claims further comprising the step of synthesising, purifying and/or formulating the compound.

17. A method for assessing the activation state of a structure for a protein kinase, wherein the structure is analysed using principle component analysis of the structure co-ordinates.

18. The method of claim 17 wherein the activation state of the structure is classified as "open", "closed" or "intermediate".

19. A mutated protein kinase, wherein the protein kinase before mutation has a hydrophobic pocket in the position equivalent to the hydrophobic pocket (PIF-binding pocket) of human PDK1 that is defined by residues including Lys115, Ile118, Ile119, Val124, Val127 and/or Leu155 of full-length human PDK1 and further has a phosphate binding pocket in the

position equivalent to the phosphate binding pocket of human PDK1 that is defined by residues including Lys76, Arg131, Thr148 and/or Gln150, and wherein one or more residues equivalent to Ile118, Val124, Val127, Lys76 or Thr148 forming part of the hydrophobic pocket or phosphate binding pocket of the protein kinase is mutated.

20. The mutated protein kinase of claim 19 wherein the protein kinase is PDK1.

21. The mutated protein kinase of claim 19 wherein the protein kinase is SGK, PKB or p70 S6 kinase.

22. The mutated protein kinase of any one of claims 19 to 21 wherein the residue at the position equivalent to residue Lys76 of PDK1 is mutated to an Ala.

23. A polynucleotide encoding a mutated protein kinase according to any one of claims 19 to 22.

24. A polynucleotide according to claim 23 suitable for expressing a mutated protein kinase according to any one of claims 19 to 22.

25. A host cell comprising a polynucleotide according to claim 23 or 24.

26. A method of making a mutated protein kinase according to any one of claims 19 to 22, the method comprising culturing a host cell according to claim 25 which expresses said mutated protein kinase and isolating said mutated protein kinase.

27. A mutated protein kinase obtainable by the method of claim 26.

28. A method of identifying a compound that modulates the protein kinase activity of a protein kinase as defined in claim 19 (for example PDK1), comprising the step of determining the effect of the compound on the protein kinase activity of, or ability of the compound to bind to a mutated protein kinase according to any one of claims 19 to 22, 27.

29. The method of claim 28 further comprising the step of determining the effect of the compound on the protein kinase activity of, or ability of the compound to bind to, the protein kinase (for example PDK1) which is not mutated as defined in any one of claims 19 to 22.

30. An antibody reactive with the phosphate binding pocket of PDK1 or other protein kinase as defined in claim 19; or an antibody reactive with PDK1 or other protein kinase as defined in claim 19 but not with the said protein kinase mutated at the phosphate binding site, or *vice versa*..

31. A method for preparing or selecting an antibody according to claim 30 wherein the antibody is prepared or selected against a said protein kinase (for example PDK1) unmutated at the phosphate binding site and a said protein kinase mutated at the phosphate binding site.

32. A kit of parts comprising (1) a mutated protein kinase (for example mutated PDK1) according to any one of claims 19 to 22, 27 (2) the corresponding protein kinase (for example PDK1) which is not mutated as defined in any one of claims 19 to 22.

33. A compound identified or identifiable by any one of claims 1 to 16, 28 or 29.

34. The compound of claim 33 wherein the compound comprises an antibody or RNA molecule.

35. A compound according to claim 33 or 34, mutated protein kinase according to any one of claims 19 to 22, 27 or polynucleotide according to claim 23 or 24, for use in medicine.

36. Use of a compound, mutated protein kinase or polynucleotide as defined in claim 35 in the manufacture of a medicament for the treatment of a patient in need of modulation of signalling by a protein kinase as defined in claim 19, for example PDK1, SGK, PKB or p70 S6 kinase, for example insulin signalling pathway and/or PDK1/PDK2/SGK/PKB/p70 S6 kinase/PRK2/PKC signalling.

37. A method of treating a patient in need of modulation of signalling by a protein kinase as defined in claim 19, for example PDK1, SGK, PKB or p70 S6 kinase, for example insulin signalling pathway and/or PDK1/PDK2/SGK/PKB/p70 S6 kinase/PRK2/PKC signalling, wherein the patient is administered an effective amount of a compound, mutated protein kinase or polynucleotide as defined in claim 35.

ABSTRACT

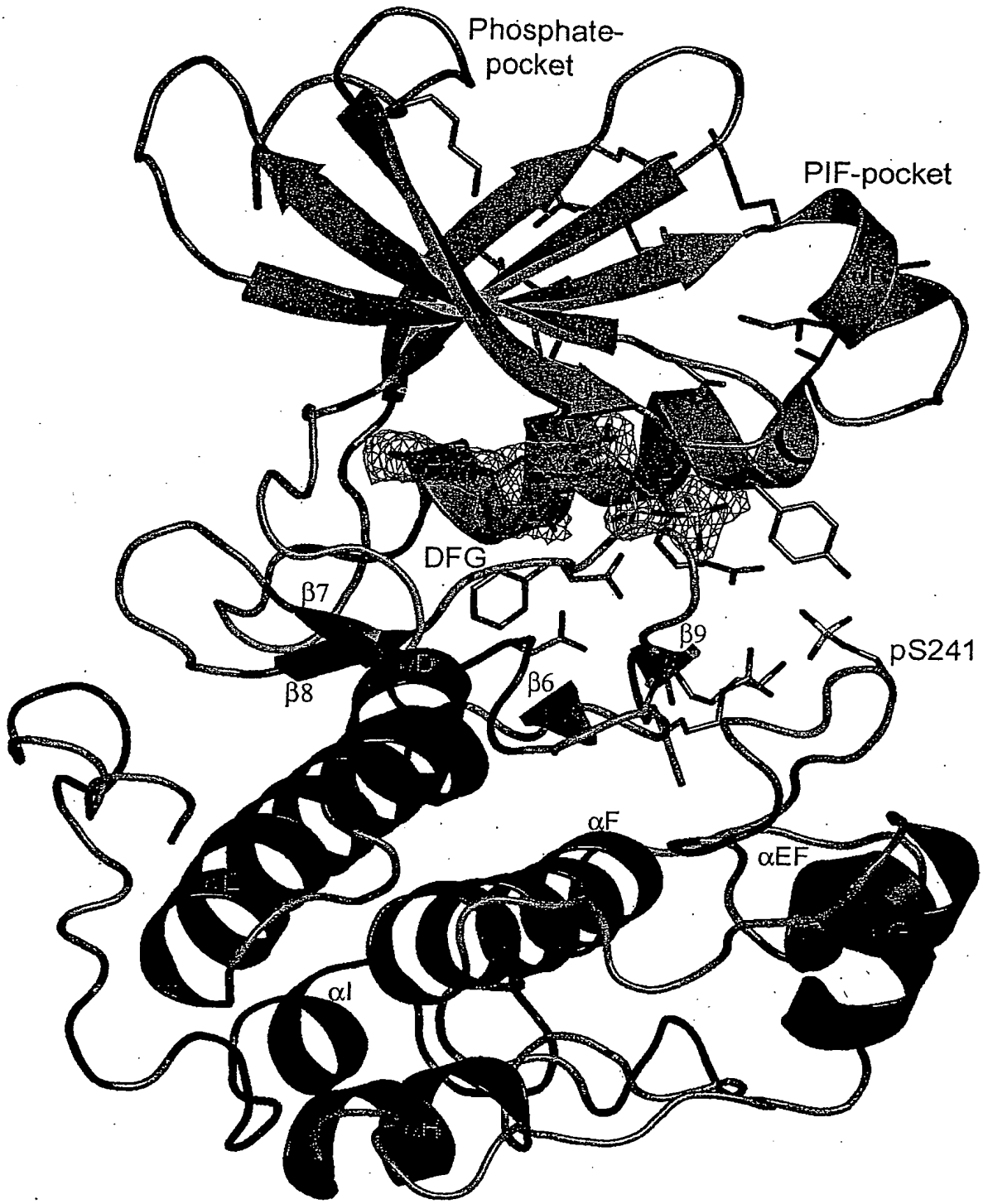
A method for selecting or designing a compound for modulating the activity of phosphoinositide dependent protein kinase 1 (PDK1), the method comprising the step of using molecular modelling means to select or design a compound that is predicted to interact with the protein kinase catalytic domain of PDK1, wherein a three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 is compared with a three-dimensional structure of a compound, and a compound that is predicted to interact with the said protein kinase catalytic domain is selected, wherein the three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 is a three-dimensional structure (or part thereof) determined for a polypeptide consisting of residues equivalent to residues 51 to 359 of full length human PDK1, or a fragment or fusion thereof.

A method for selecting or designing a compound for modulating the activity of a hydrophobic pocket (PIF binding pocket)-containing protein kinase having a hydrophobic pocket in the position equivalent to the hydrophobic pocket of human PDK1 that is defined by residues including Lys115, Ile118, Ile119, Val124, Val127 and/or Leu155 of full-length human PDK1 and further having a phosphate binding pocket in the position equivalent to the phosphate binding pocket of human PDK1 that is defined by residues including Lys76, Arg131, Thr148 and/or Gln150, the method comprising the step of using molecular modelling means to select or design a compound that is predicted to interact with the said hydrophobic pocket-containing protein kinase, wherein a three-dimensional structure of a compound is compared with a three-dimensional structure of the said phosphate binding pocket and optionally also the hydrophobic pocket and/or αC helix or region interacting therewith, and a compound that is predicted to interact with the said phosphate binding pocket and optionally

also the hydrophobic pocket and/or αC helix or region interacting therewith, is selected.

FIGURE 1.

Figure 1



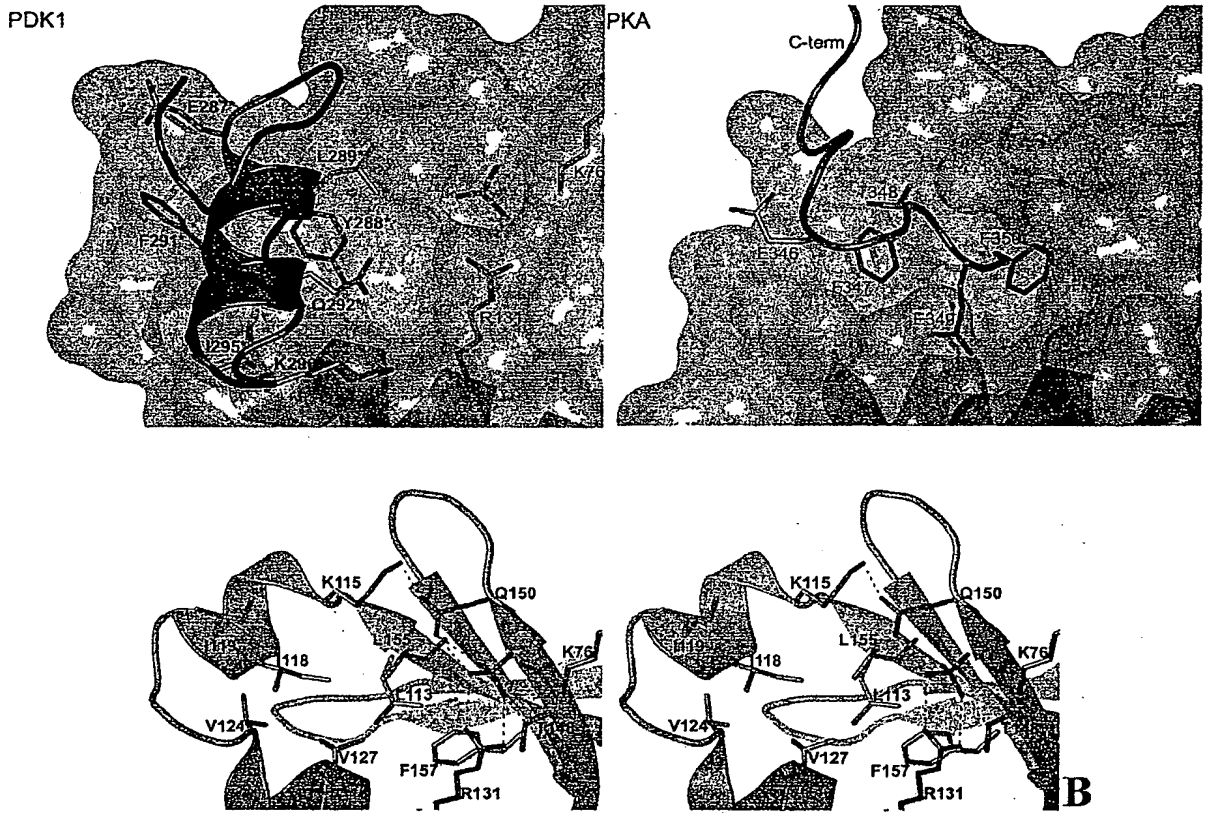

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Figure 2

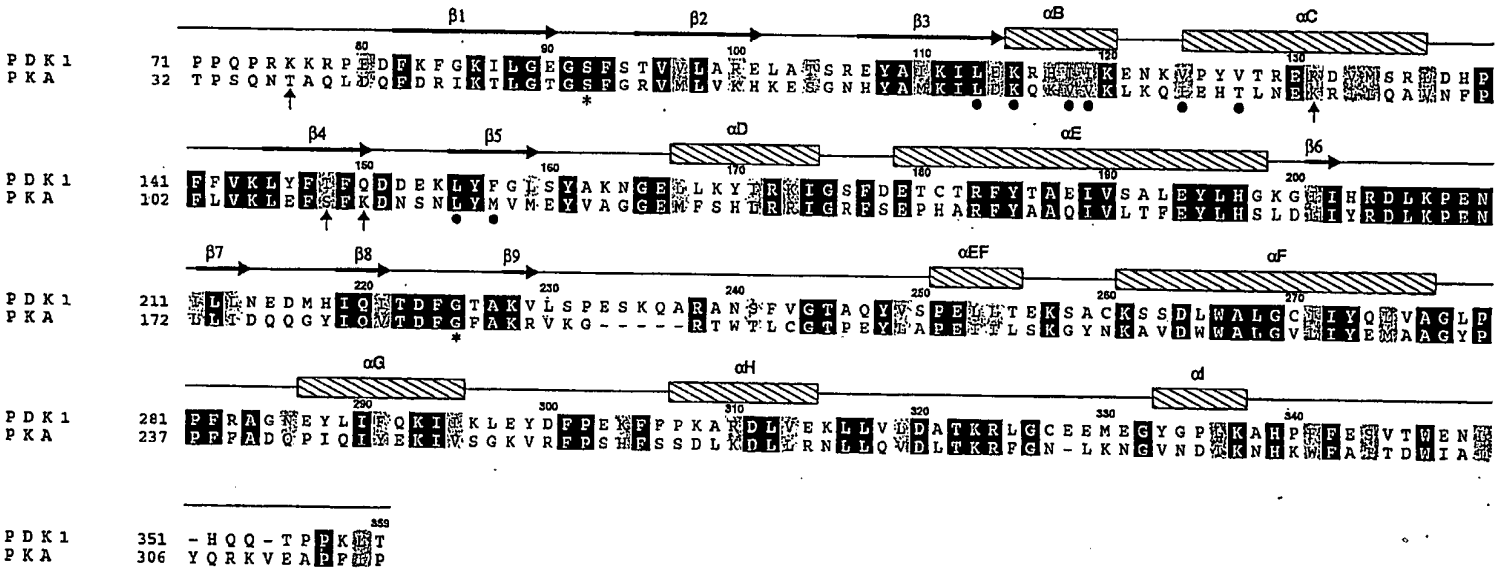
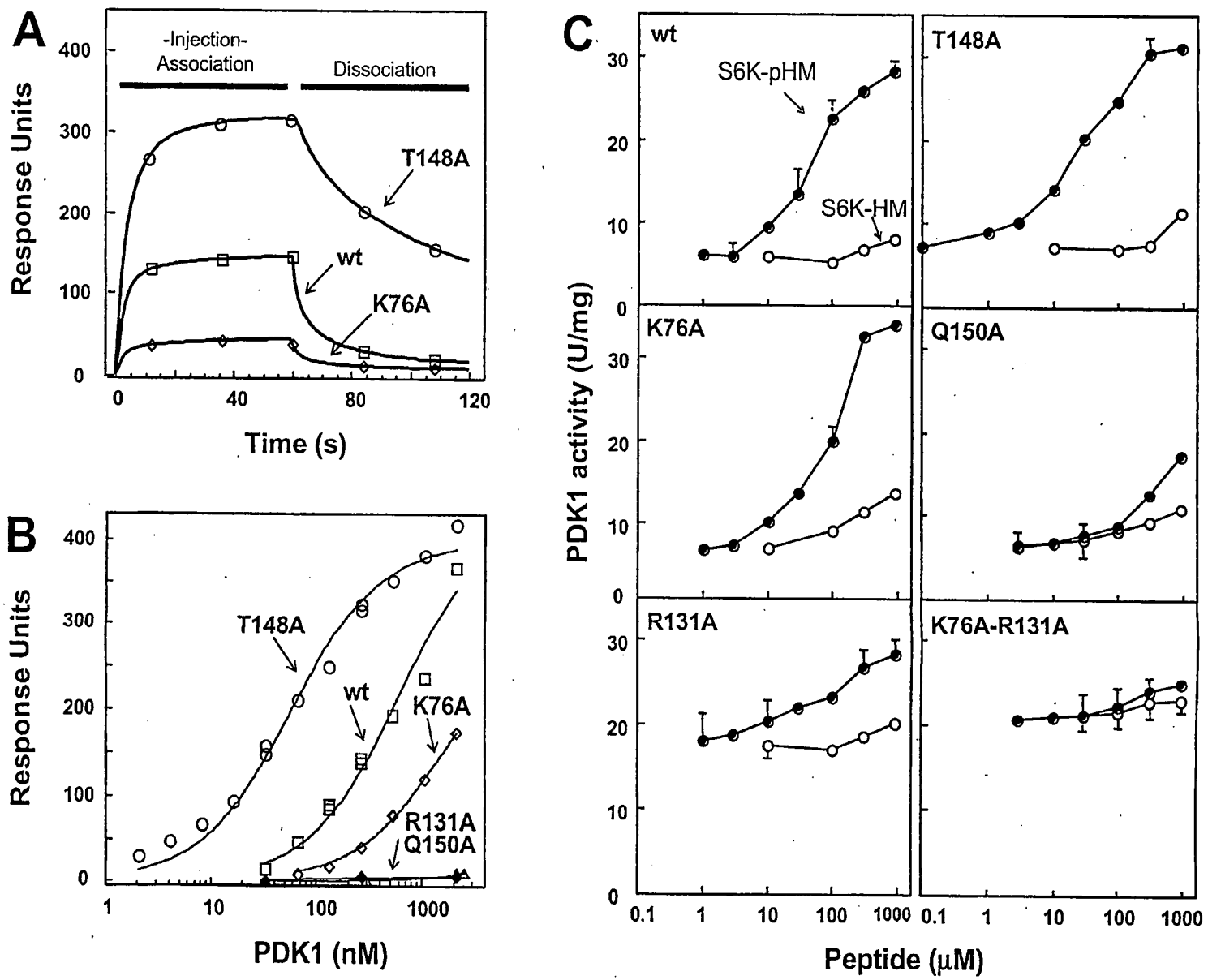


Figure 3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wt
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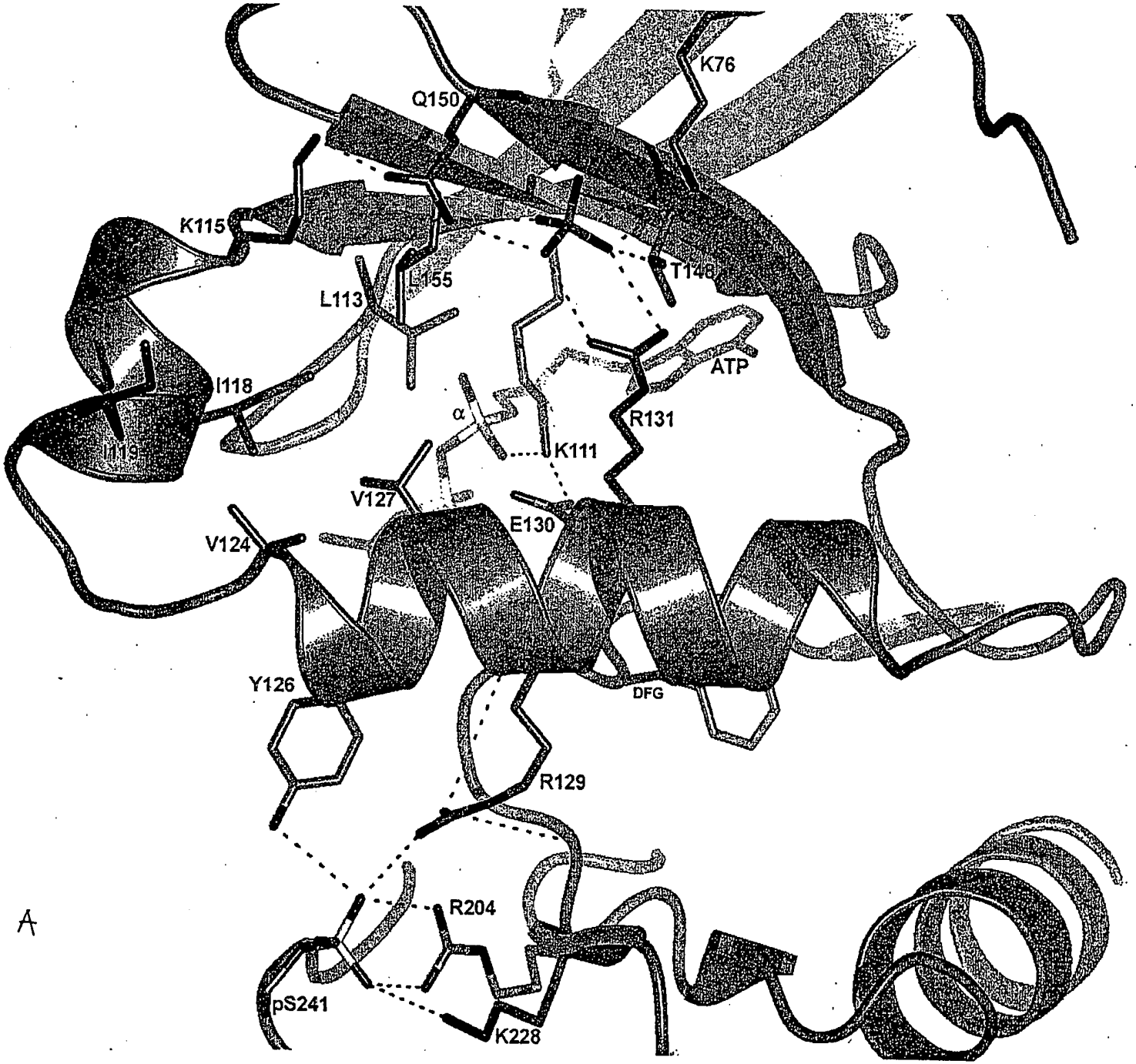
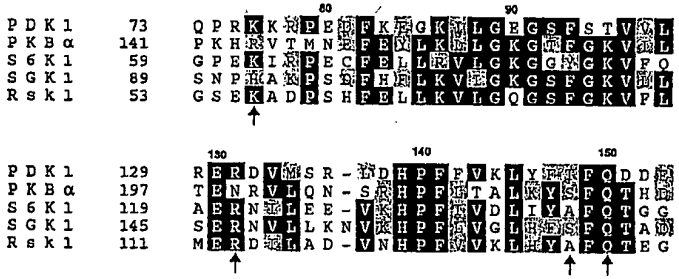
20
10
0
0.1
1
10
100
1000
Peptide (μM)


K76
Q150
K115
T148
L155
L113
ATP
I118
α
R131
I119
K111
V127
E130
V124
Y126
DFG
R129
R204
pS241
K228

A



B

Figure 5

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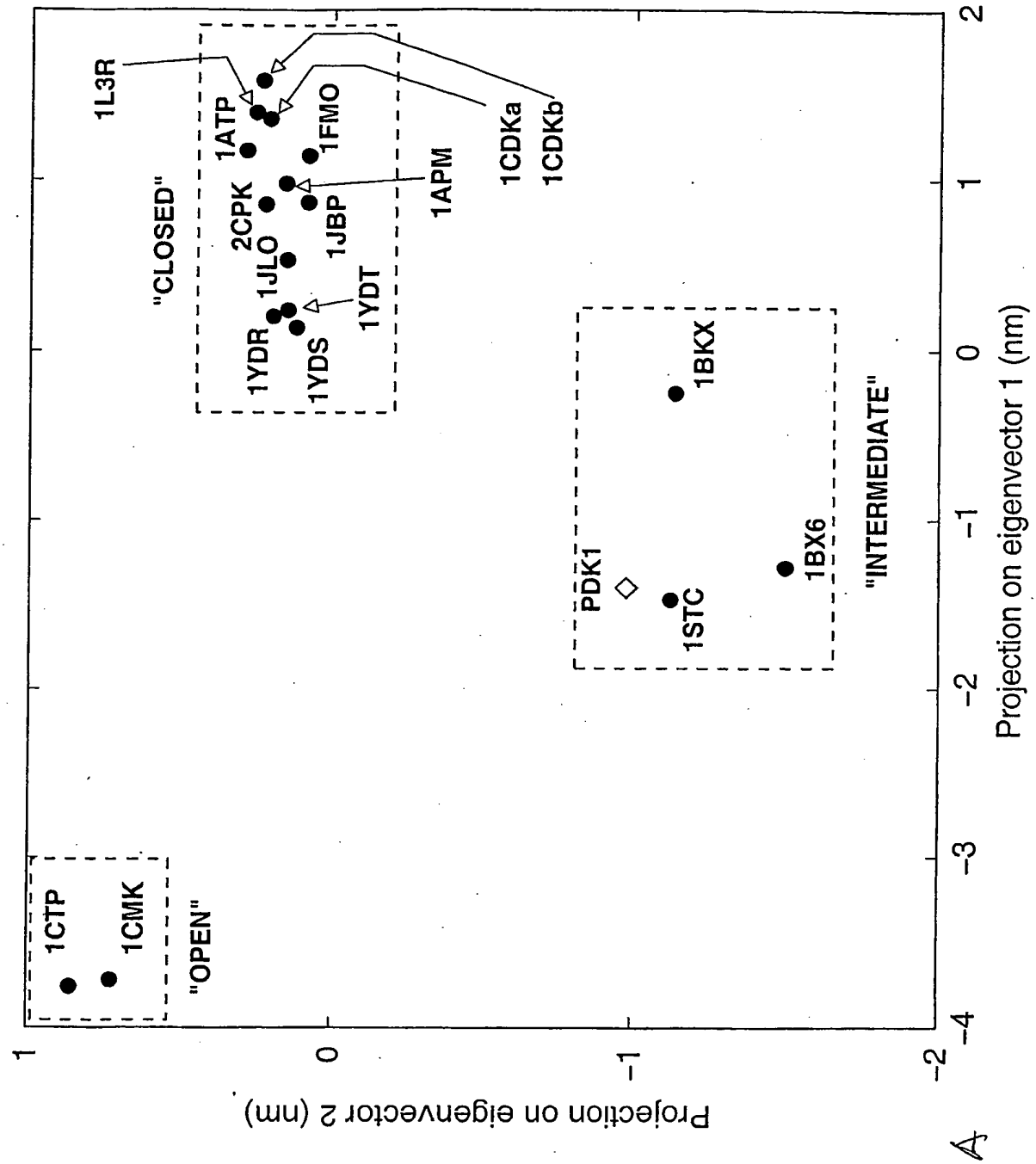

A

Figure 6

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B

Figure 6

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Lys115

Ile119

Figure 7 (page 1 of 6)

```
p70S6Kalpha   104 KVFQVRKVTGANTGKIFAMKVLKKAMIVRNAKDTAHTKAERNILEEVK--H-P-----FI
p70S6Kbeta     93 KVFQVRKVQGTNLGKIYAMKVLRKAKIVRNAKDTAHTRAERNILESVK--H-P-----FI
p90RSK1        81 KVFLVKKISGSDARQLYAMKVLKKATLKVRDRVR--TKMERDILVEVN--H-P-----FI
p90RSK2        81 KVFLVKKISGSDARQLYAMKVLKKATLKVRDRVR--TKMERDILVEVN--H-P-----FI
p90RSK3        72 KVFLVRKVKGSDAGQLYAMKVLKKATLKVRDRVR--SKMERDILAEVN--H-P-----FI
MSK1           62 KVFLVRKISGHDTGKLYAMKVLKKATIVQKAKTTEHTRTERQVLEHIR--QSP-----FL
MSK2           30 KVFLVRKAGGHDAGKLYAMKVLRKAALVQRAKTQEHTRTERSVLELVR--QAP-----FL
PKBalpha      163 KVILVKEK---ATGRYYAMKILKKEVIVAKDEVA-HTLTENRVLQNS---RHP-----FL
PKBbeta       165 KVILVREK---ATGRYYAMKILRKEVIIAKDEVA-HTVTESRVLQNT---RHP-----FL
PKBgamma      161 KVILVREK---ASGKYYAMKILKKEVIIAKDEVA-HTLTESRVLKNT---RHP-----FL
PRK1          628 KVLLSEFR---PSGELFAIKALKKGDIVARDEVE-SLMCEKRILAAVTSAGHP-----FL
PRK2          670 KVLLAEYK---NTNEMFAIKALKKGDIVARDEVD-SLMCEKRIFETVNSVRHP-----FL
SGK1          111 KVLLARHK---AEEVFYAVKVLQKKAILKKKEEK-HIMSERNVLLKN--VKHP-----FL
SGK3          108 KVLLAKRK---LDGKFYAVKVLQKKIVLNRKEQK-HIMAERNVLLKN--VKHP-----FL
SGK2          108 KVLLAKRK---SDGAFYAVKVLQKKSILKKKEQS-HIMAERSVLLKN--VRHP-----FL
PKCbeta       355 KVMLSERK---GTDELYAVKILKKDVVIQDDDVE-CTMVEKRVLALP--GKPP-----FL
PKCbetaII     355 KVMLSERK---GTDELYAVKILKKDVVIQDDDVE-CTMVEKRVLALP--GKPP-----FL
PKCalpha      352 KVMLADRK---GTEELYAIKILKKDVVIQDDDVE-CTMVEKRVLALL--DKPP-----FL
PKCgamma      364 KVMLAERR---GSDELYAIKILKKDVIVQDDDVD-CTLVEKRVLALG--GRGPGGRPHFL
PKCzeta       257 KVLLVRLK---KNDQIYAMKVVKKELVHDDEDID-WVQTEKHVFEQA--SSNP-----FL
PKCiota       258 KVLLVRLK---KTDRIYAMKVVKKELVNDDEDID-WVQTEKHVFEQA--SNHP-----FL
PKCdelta      362 KVLLGELK---GRGEYSAIKALKKDVVLIDDDVE-CTMVEKRVLTLAA--ENP-----FL
PKAgamma       57 RVMLVRHQ---ETGGHYAMKILNKQKVVKMKQVE-HILNEKRILQAI---DFP-----FL
PDK1           95 TVVLAREL---ATSREYAIKILEKRHIIKENKVP-YVTRERDVMSRL---DHP-----FF
```

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Figure 7 (page 2 of 6)

Gln150 ↓ ↓ Leu155

```
p70S6Kalpha   156 VDLIYAFQTGGKLYLILEYLSGGELFMQLEREGIFMEDTACFYLAEISMALGHLHQ-KGI
p70S6Kbeta    145 VELAYAFQTGGKLYLILECLSGGELFTHLEREGIFLEDTACFYLAEITLALGHLHS-QGI
p90RSK1       131 VKLHYAFQTEGKLYLILDFLRGGDLFTRLSKEVMFTEEDVKFYLAELALALDHLHS-LGI
p90RSK2       131 VKLHYAFQTEGKLYLILDFLRGGDLFTRLSKEVMFTEEDVKFYLAELALALDHLHS-LGI
p90RSK3       122 VKLHYAFQTEGKLYLILDFLRGGDLFTRLSKEVMFTEEDVKFYLAELALALDHLHS-LGI
MSK1          115 VTLHYAFQTETKLHLILDYINGGELFTHLSQRERFTEHEVQIYVGEIVLALEHLHK-LGI
MSK2           83 VTLHYAFQTDAKLHLILDYVSGGEMFTHLYQRQYFKEAEVRVYGGEIVLALEHLHK-LGI
PKBalpha      211 TALKYSFQTHDRLCFVMEYANGGELFFHLSRERVFSEDRARFYGAEIVSALDYLHSEKNV
PKBbeta       213 TALKYAFQTHDRLCFVMEYANGGELFFHLSRERVFTEERARFYGAEIVSALEYLHS-RDV
PKBgamma      209 TSLKYSFQTKDRLCFVMEYVNGGELFFHLSRERVFSEDRTRFYGAEIVSALDYLHS-GKI
PRK1          679 VNLFGCFQTPEHVCFVMEYSAGGDLMLHIHSD-VFSEPRAIFYSACVVLGLQFLHE-HKI
PRK2          721 VNLFACFQTKEHVCFVMEYAAGGDLMMHIHTD-VFSEPRAVFYAACVVLGLQYLHE-HKI
SGK1          160 VGLHFSFQTADKLYFVLDYINGGELFYHLQRERCFLEPRARFYAAEIASALGYLHS-LNI
SGK3          157 VGLHYSFQTTEKLYFVLDFVNGGELFFHLQRERSFPEHRARFYAAEIASALGYLHS-IKI
SGK2          157 VGLRYSFQTPEKLYFVLDYVNGGELFFHLQRERRFLEPRARFYAAEVASAIGYLHS-LNI
PKCbeta       404 TQLHSCFQTMDRLYFVMEYVNGGDLMYHIQQVGRFKEPHAVFYAAEIAIGLFFLQS-KGI
PKCbetaII     404 TQLHSCFQTMDRLYFVMEYVNGGDLMYHIQQVGRFKEPHAVFYAAEIAIGLFFLQS-KGI
PKCalpha      401 TQLHSCFQTVDRLYFVMEYVNGGDLMYHIQQVGKFKEPQAVFYAAEISIGLFFLHK-RGI
PKCgamma      418 TQLHSTFQTPDRLYFVMEYVTGGDLMYHIQQLGKFKEPHAAFYAAEIAIGLFFLHN-QGI
PKCzeta       306 VGLHSCFQTTSRLFLVIEYVNGGDLMFHMQRQRKLPEEHARFYAAEICIALNFLHE-RGI
PKCiota       307 VGLHSCFQTESRLFFVIEYVNGGDLMFHMQRQRKLPEEHARFYSAEISLALNYLHE-RGI
PKCdelta      411 THLICTFQTKDHLFFVMEFLNGGDLMYHIQDKGRFELYRATFYAAEIMCGLQFLHS-KGI
PKAgamma      105 VKLQFSFKDNSYLYLVMEYVPGGEMFSRLQRVGRFSEPHACFYAAQVVLAVQYLHS-LDL
PDK1          143 VKLYFTFQDDEKLYFGLSYAKNGELLKYIRKIGSFDETCTRFYTAEIVSALEYLHG-KGI
```

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p70S6Kalpha	215	IYRDLKPENIMLNHQGHVKLTDFGLCKESIHDGT---VTHTFCGTIEYMAPEILM--RSG
p70S6Kbeta	204	IYRDLKPENIMLSSQGHIKLTDFGLCKESIHEGA---VTHTFCGTIEYMAPEILV--RSG
p90RSK1	190	IYRDLKPENILLDEEGHIKLTDFGLSKESIDHEK---KAYSFCGTVEYMAPEVVN--RRG
p90RSK2	190	IYRDLKPENILLDEEGHIKLTDFGLSKESIDHEK---KAYSFCGTVEYMAPEVVN--RRG
p90RSK3	181	IYRDLKPENILLDEEGHIKITDFGLSKEAIDHDK---RAYSFCGTIEYMAPEVVN--RRG
MSK1	174	IYRDIKLENILLDSNGHVVLTDFGLSKEFVADET--ERAYSFCGTIEYMAPDIVRGGDSG
MSK2	142	IYRDLKLENVLLDSEGHIVLTDFGLSKEFLTEEK--ERTFSFCGTIEYMAPEIIR-SKTG
PKBalpha	271	VYRDLKLENLMLDKDGHIKITDFGLCKEGIKDGA---TMKTFCGTPEYLAPEVLE--DND
PKBbeta	272	VYRDIKLENLMLDKDGHIKITDFGLCKEGISDGA---TMKTFCGTPEYLAPEVLE--DND
PKBgamma	268	VYRDLKLENLMLDKDGHIKITDFGLCKEGITDAA---TMKTFCGTPEYLAPEVLE--DND
PRK1	737	VYRDLKLDNLLLDTEGYVKIADFGLCKEGMGYGD---RTSTFCGTPEFLAPEVLT--DTS
PRK2	779	VYRDLKLDNLLLDTEGFVKIADFGLCKEGMGYGD---RTSTFCGTPEFLAPEVLT--ETS
SGK1	219	VYRDLKPENILLDSQGHIVLTDFGLCKENIEHNS---TTSTFCGTPEYLAPEVLH--KQP
SGK3	216	VYRDLKPENILLDSVGHVVLTDFGLCKEGIAISD---TTTTFCGTPEYLAPEVIR--KQP
SGK2	216	IYRDLKPENILLDCQGHVVLTDFGLCKEGVEPED---TTSTFCGTPEYLAPEVLR--KEP
PKCbeta	463	IYRDLKLDNVMLDSEGHIKIADFGMCKENIWDGV---TTKTFCGTPDYIAPEIIA--YQP
PKCbetaII	463	IYRDLKLDNVMLDSEGHIKIADFGMCKENIWDGV---TTKTFCGTPDYIAPEIIA--YQP
PKCalpha	460	IYRDLKLDNVMLDSEGHIKIADFGMCKEHMMDGV---TTRTFCGTPDYIAPEIIA--YQP
PKCgamma	477	IYRDLKLDNVMLDAEGHIKITDFGMCKENVFPGT---TTRTFCGTPDYIAPEIIA--YQP
PKCzeta	365	IYRDLKLDNVLLDADGHIKLTDYGMCKEGLGPGD---TTSTFCGTPNYIAPEILR--GEE
PKCiota	366	IYRDLKLDNVLLDSEGHIKLTDYGMCKEGLRPGD---TTSTFCGTPNYIAPEILR--GED
PKCdelta	470	IYRDLKLDNVLLDRDGHIKIADFGMCKENIFGES---RASTFCGTPDYIAPEILQ--GLK
PKAgamma	164	IHRDLKPENLLIDQQGYLQVTDFGFAKRVKG------RTWTLCGTPEYLAPEIIL--SKG
PDK1	202	IHRDLKPENILLNEDMHIQITDFGTAKVLSPESKQA-RANSFVGTAQYVSPELLT--EKS

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p70S6Kalpha   270 HNRAVDWWSLGALMYDMLTGAPPFTGE------NRK---KTIDKILKCKLNLPPYLTQEA
p70S6Kbeta    259 HNRAVDWWSLGALMYDMLTGSPPFTAE------NRK---KTMDKIIRGKLALPPYLTPDA
p90RSK1       245 HTQSADWWSFGVLMFEMLTGTLPFQGK------DRK---ETMTMILKAKLGMPQFLSPEA
p90RSK2       245 HTQSADWWSFGVLMFEMLTGTLPFQGK------DRK---ETMTMILKAKLGMPQFLSPEA
p90RSK3       236 HTQSADWWSFGVLMFEMLTGSLPFQGK------DRK---ETMALILKAKLGMPQFLSGEA
MSK1          232 HDKAVDWWSLGVLMYELLTGASPFTVDG-----EKNSQAEISRRILKSEPPYPQEMSALA
MSK2          199 HGKAVDWWSLGILLFELLTGASPFTLEG-----ERNTQAEVSRRILKCSPPFPPRIGPVA
PKBalpha      326 YGRAVDWWGLGVVMYEMMCGRLPFYNQD---------HEKLFELILMEEIRFPRTLGPEA
PKBbeta       327 YGRAVDWWGLGVVMYEMMCGRLPFYNQD---------HERLFELILMEEIRFPRTLSPEA
PKBgamma      323 YGRAVDWWGLGVVMYEMMCGRLPFYNQD---------HEKLFELILMEDIKFPRTLSSDA
PRK1          792 YTRAVDWWGLGVLLYEMLVGESPFPGDD---------EEEVFDSIVNDEVRYPRFLSAEA
PRK2          834 YTRAVDWWGLGVLIYEMLVGESPFPGDD---------EEEVFDSIVNDEVRYPRFLSTEA
SGK1          274 YDRTVDWWCLGAVLYEMLYGLPPFYSRN---------TAEMYDNILNKPLQLKPNITNSA
SGK3          271 YDNTVDWWCLGAVLYEMLYGLPPFYCRD---------VAEMYDNILHKPLSLRPGVSLTA
SGK2          271 YDRAVDWWCLGAVLYEMLHGLPPFYSQD---------VSQMYENILHQPLQIPGGRTVAA
PKCbeta       518 YGKSVDWWAFGVLLYEMLAGQAPFEGED---------EDELFQSIMEHNVAYPKSMSKEA
PKCbetaII     518 YGKSVDWWAFGVLLYEMLAGQAPFEGED---------EDELFQSIMEHNVAYPKSMSKEA
PKCalpha      515 YGKSVDWWAYGVLLYEMLAGQPPFDGED---------EDELFQSIMEHNVSYPKSLSKEA
PKCgamma      532 YGKSVDWWSFGVLLYEMLAGQPPFDGED---------EEELFQAIMEQTVTYPKSLSREA
PKCzeta       420 YGFSVDWWALGVLMFEMMAGRSPFDIIT--DNPDMNTEDYLFQVILEKPIRIPRFLSVKA
PKCiota       421 YGFSVDWWALGVLMFEMMAGRSPFDIVGSSDNPDQNTEDYLFQVILEKQIRIPRSLSVKA
PKCdelta      525 YTFSVDWWSFGVLLYEMLIGQSPFHGDD---------EDELFESIRVDTPHYPRWITKES
PKAgamma      216 YNKAVDWWALGVLIYEMAVGFPPFYADQ---------PIQIYEKIVSGRVRFPSKLSSDL
PDK1          259 ACKSSDLWALGCIIYQLVAGLPPFRAGN---------EYLIFQKIIKLEYDFPEKFFPKA
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p70S6Kalpha   321 RDLLKKLLKRNAASRLGAGPG-DAGEVQAHPFFRHINWEELLAR--KVEPPFKPLLQSE-
p70S6Kbeta    310 RDLVKKFLKRNPSQRIGGGPG-DAADVQRHPFFRHMNWDDLLAW--RVDPPFRPCLQSE-
p90RSK1       296 QSLLRMLFKRNPANRLGAGPD-GVEEIKRHSFFSTIDWNKLYRR--EIHPPFKPATGRP-
p90RSK2       296 QSLLRMLFKRNPANRLGAGPD-GVEEIKRHSFFSTIDWNKLYRR--EIHPPFKPATGRP-
p90RSK3       287 QSLLRALFKRNPCNRLGAGID-GVEEIKRHPFFVTIDWNTLYRK--EIKPPFKPALGRP-
MSK1          287 KDLIQRLLMKDPKKRLGCGPR-DADEIKEHLFFQKINWDDLAAK--KVPAPFKPVIRDE-
MSK2          254 QDLLQRLLCKDPKKRLGAGPQ-GAQEVRNHPFFQGLDWVALAAR--KIPAPFRPQIRSE-
PKBalpha      377 KSLLSGLLKKDPKQRLGGGSE-DAKEIMQHRFFAGIVWQHVYEK--KLSPPFKPQVTSE-
PKBbeta       378 KSLLAGLLKKDPKQRLGGGPS-DAKEVMEHRFFLSINWQDVVQK--KLLPPFKPQVTSE-
PKBgamma      374 KSLLSGLLIKDPNKRLGGGPD-DAKEIMRHSFFSGVNWQDVYDK--KLVPPFKPQVTSE-
PRK1          843 IGIMRRLLRRNPERRLGSSER-DAEDVKKQPFFRTLGWEALLAR--RLPPPFVPTLSGR-
PRK2          885 ISIMRRLLRRNPERRLGASEK-DAEDVKKHPFFRLIDWSALMDK--KVKPPFIPTIRGR-
SGK1          325 RHLLEGLLQKDRTKRLGAKDD--FMEIKSHVFFSLINWDDLINK--KITPPFNPNVSGP-
SGK3          322 WSILEELLEKDRQNRLGAKED--FLEIQNHPFFESLSWADLVQK--KIPPPFNPNVAGP-
SGK2          322 CDLLQSLLHKDQRQRLGSKAD--FLEIKNHVFFSPINWDDLYHK--RLTPPFNPNVTGP-
PKCbeta       569 VAICKGLMTKHPGKRLGCGPE-GERDIKEHAFFRYIDWEKLERK--EIQPPYKPKARDK-
PKCbetaII     569 VAICKGLMTKHPGKRLGCGPE-GERDIKEHAFFRYIDWEKLERK--EIQPPYKPKACG--
PKCalpha      566 VSICKGLMTKHPAKRLGCGPE-GERDVREHAFFRRIDWEKLENR--EIQPPFKPKVCG--
PKCgamma      583 VAICKGFLTKHPGKRLGSGPD-GEPTIRAHGFFRWIDWERLERL--EIPPPFRPRPCG--
PKCzeta       478 SHVLKGFLNKDPKERLGCRPQTGFSDIKSHAFFRSIDWDLLEKK--QALPPFQPQITDD-
PKCiota       481 ASVLKSFLNKDPKERLGCHPQTGFADIQGHPFFRNVDWDMMEQK--QVVPPFKPNISGE-
PKCdelta      576 KDILEKLFEREPTKRLGMTGN-----IKIHPFFKTINWTLLEKR--RLEPPFRPKVKSP-
PKAgamma      267 KDLLRSLLQVDLTKRFGNLRN-GVGDIKNHKWFATTSWIAIYEK--KVEAPFIPKYTGP-
PDK1          310 RDLVEKLLVLDATKRLGCEEMEGYGPLKAHPFFESVTWENLHQQTPPKLTAYLPAMSEDD
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Figure 7 (page 5 of 6)

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p70S6Kalpha   377 ----EDVSQFDSKFTRQTPVDSPDDSTLSESA----------NQVFLGFTYVAPSVLES-
p70S6Kbeta    366 ----EDVSQFDTRFTRQTPVDSPDDTALSESA----------NQAFLGFTYVAPSVLDS-
p90RSK1       352 ----EDTFYFDPEFTAKTPKDSP-GIPPSANA----------HQLFRGFSFVAITSDDE-
p90RSK2       352 ----EDTFYFDPEFTAKTPKDSP-GIPPSANA----------HQLFRGFSFVAITSDDE-
p90RSK3       343 ----EDTFHFDPEFTARTPTDSP-GVPPSANA----------HHLFRGFSFVASSLIQEP
MSK1          343 ----LDVSNFAEEFTEMDPTYSPAALPQSSE-----------KLFQGYSFVAPSILFKR
MSK2          310 ----LDVGNFAEEFTRLEPVYSPPGSPPPGDP----------RIFQGYSFVAPSILFDH
PKBalpha      433 ----TDTRYFDEEFTAQMITITP---PDQDDS--MECVDSERRPHFPQFSYSASSTA---
PKBbeta       434 ----VDTRYFDDEFTAQSITITP---PDRYDS--LGLLELDQRTHFPQFSYSASIRE---
PKBgamma      430 ----TDTRYFDEEFTAQTITITP---PEKYDEDGMDCMDNERRPHFPQFSYSASGRE---
PRK1          899 ----TDVSNFDEEFTGEAPTLSP---PRD--A--R-PLTAAEQAAFLDFDFVAGGC----
PRK2          941 ----EDVSNFDDEFTSEAPILTP---PRE--P--R-ILSEEEQEMFRDFDYIADWC----
SGK1          380 ----NDLRHFDPEFTEEPVPNSIGKSPDSVLVT---ASVKEAAEAFLGFSYAPPT-DSFL
SGK3          377 ----DDIRNFDTAFTEETVPYSVCVSSDYSIVN---ASVLEADDAFVGFSYAPPSEDLFL
SGK2          377 ----ADLKHFDPEFTQEAVSKSIGCTPDTVAS----SS--GASSAFLGFSYAPEDDDILD
PKCbeta       625 ----RDTSNFDKEFTRQPVELTP---TDKLFIM---NLD---QNEFAGFSYTNPEFVINV
PKCbetaII     624 ----RNAENFDRFFTRHPPVLTP---PDQEVIR---NID---QSEFEGFSFVNSEFLKPE
PKCalpha      621 ----KGAENFDKFFTRGQPVLTP---PDQLVIA---NID---QSDFEGFSYVNPQFVHPI
PKCgamma      638 ----RSGENFDKFFTRAAPALTP---PDRLVLA---SID---QADFQGFTYVNPDFVHPD
PKCzeta       535 ----YGLDNFDTQFTSEPVQLTP---DDEDAIK---RID---QSEFEGFEYINPLLLSTE
PKCiota       538 ----FGLDNFDSQFTNEPVQLTP---DDDDIVR---KID---QSEFEGFEYINPLLMSAE
PKCdelta      628 ----RDYSNFDQEFLNEKARLSY---SDKNLID---SMD---QSAFAGFSFVNPKFEHLL
PKAgamma      323 ----GDASNFDDYEE-EELRISI---NEK-CA-----------KEFSEF-----------
PDK1          370 EDCYGNYDNLLSQFGCMQVSSSSSSHSLSASDTGLPQRSGSNIEQYIHDLDSNSFELDLQ
```

Figure 7 (page 6 of 6)